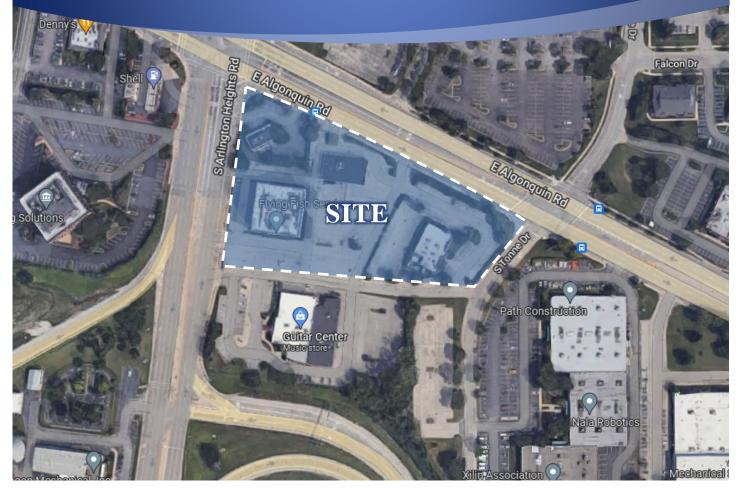
Traffic and Parking Study Proposed Mixed-Use Development

Arlington Heights, Illinois



Prepared For:

Moceri+Roszak



1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed mixed-use development to be located in Arlington Heights, Illinois. This site is located in the southeast quadrant of the intersection of Algonquin Road (IL 62) with Arlington Heights Road and currently contains the following uses:

- The 125, 135, and 145 Algonquin Road office buildings
- Guitar Center
- The vacant 2335 Arlington Heights Road office building
- A vacant commercial building
- A former drive-through bank
- The vacant/former Applebee's restaurant
- The vacant/former Daily Herald office building

Primary access to the various uses is provided via Tonne Road and its signalized intersection with Algonquin Road. In addition, access is provided via four right-turn in/right-turn out access drives on Arlington Heights Road and four right-turn in/right-turn out access drives on Algonquin Road.

As proposed, the project is to be developed in several phases with Phase 1 of the development to be located in the southeast corner of the Arlington Heights Road/Algonquin Road intersection and to consist of 301 residential units, 25,000 square feet of commercial space, and approximately 558 parking spaces. It should be noted that the development of the future phases of the of the overall development is conceptual at this time as several parcels are under different ownership and any future phases will need to be approved by the Village. Currently, the overall development is anticipated to consist of approximately 901 residential units, a 200-room business hotel, 76,600 square feet of medical office space, 76,600 square feet of general office space, 45,000 square feet of commercial space, and approximately 2,540 parking spaces. Access to Phase 1 and the overall development will be provided via Tonne Road and its signalized intersection with Algonquin Road, via a right-in/right-out access drive on Arlington Heights Road, and via a right-in/right-out access drive on Algonquin Road.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate the traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

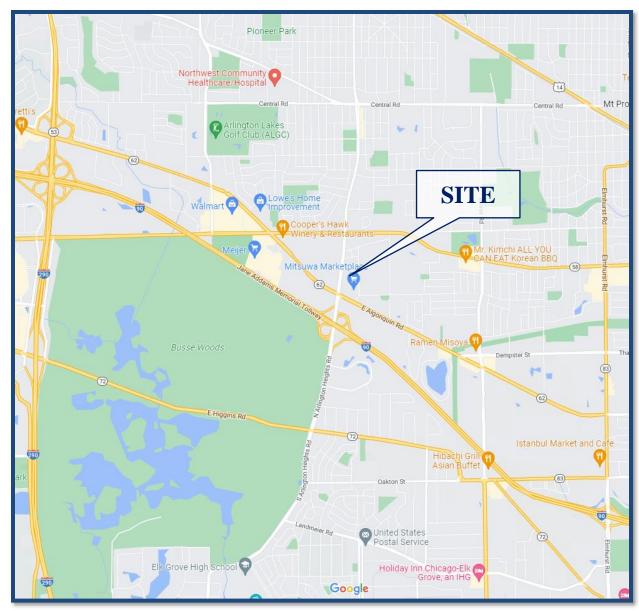


The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system
- Evaluation of the proposed parking supply

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

- 1. Existing Conditions Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
- 2. Year 2029 No-Build Conditions Analyzes the capacity of the future roadway system using the no-build traffic volumes that include the existing traffic volumes, an ambient traffic growth factor, and traffic generated by other area developments.
- 3. Year 2029 Total Projected Conditions Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient traffic growth, traffic generated by other area developments, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location

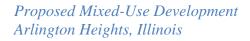
Figure 1





Aerial View of Site

Figure 2





2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

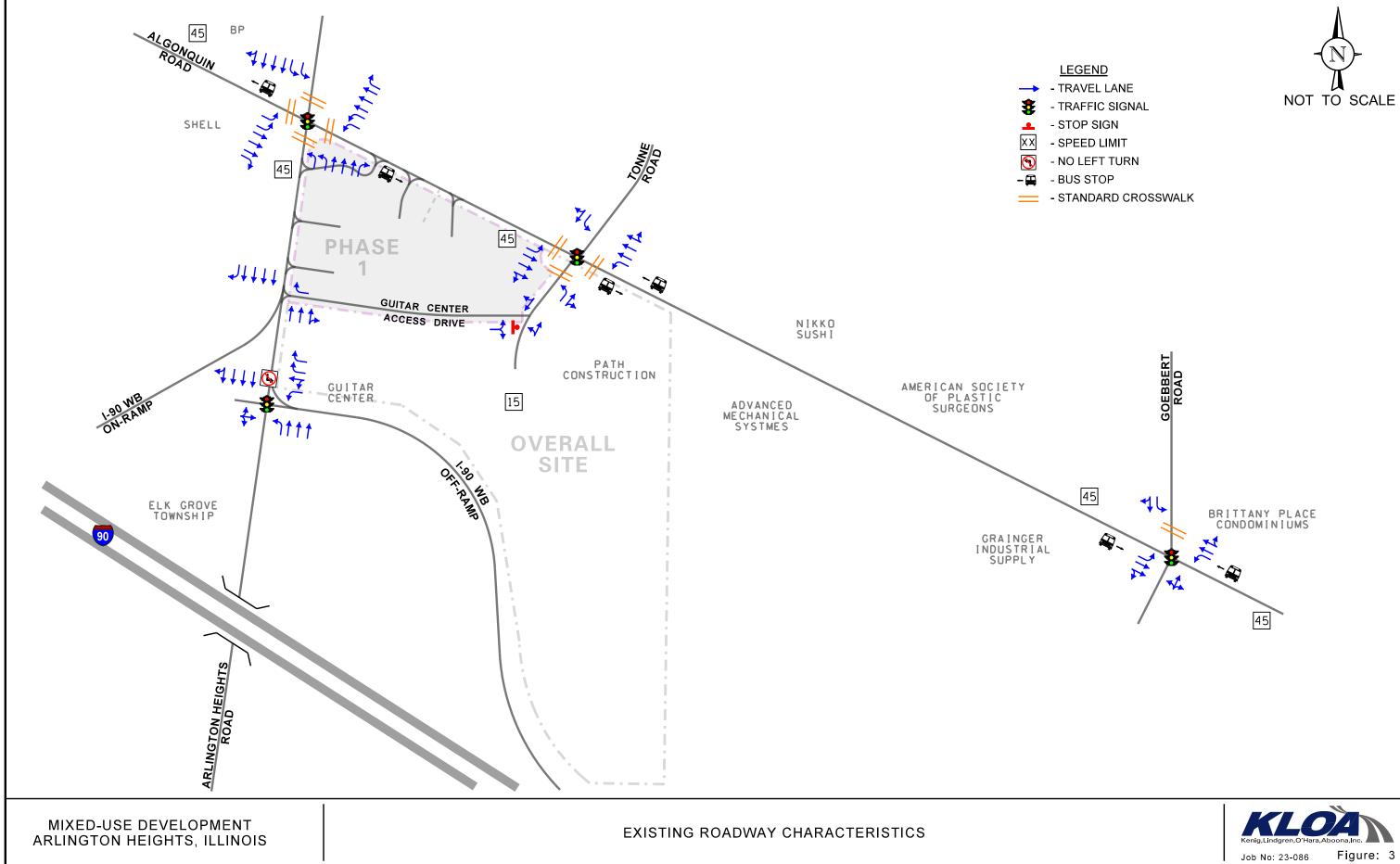
The site of the overall development is bounded by Algonquin Road on the north, Arlington Heights Road on the west, I-90 and its interchange with Arlington Heights on the south and west, and an a industrial/warehouse building on the east. Currently, the site contains several office and commercial buildings with most of the buildings currently vacant. Land uses in the vicinity of the site are primarily commercial and office. Office developments are located west of the site on the west side of Arlington Heights Road.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Algonquin Road (IL 62) is a southeast-to-northwest, minor arterial roadway that provides three lanes in each direction between Arlington Heights Road and Tonne Road and provides two lanes in each direction between Tonne Road and Goebbert Road. At its signalized intersection with Arlington Heights Road, Algonquin Road provides dual left-turn lanes, three through lanes, and an exclusive right-turn lane on the eastbound and westbound approaches. Crosswalks and pedestrian signals are provided on the eastbound and westbound approaches of this intersection. At its signalized intersection with Tonne Road, Algonquin Road provides an exclusive left-turn lane, two through lanes, and a shared through/right-turn lane on the eastbound and westbound approaches. Crosswalks and pedestrian signals are present on the eastbound and westbound approaches. Crosswalks and pedestrian signals are present on the eastbound and westbound approaches of this intersection. At its signalized intersection. At its signalized intersection. At its signalized intersection with Goebbert Road, Algonquin Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on the eastbound and westbound approaches. Crosswalks and provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on the eastbound and westbound approaches. Algonquin Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), carries an Annual Average Daily Traffic (AADT) volume of 17,100 vehicles east of Arlington Heights Road and 24,000 vehicles west of Arlington Heights Road (IDOT 2021), and has a posted speed limit of 45 miles per hour in the vicinity of the site.







Arlington Heights Road is a is a north-south, minor arterial roadway that provides three lanes in each direction. At its signalized intersection with Algonquin Road, Arlington Heights Road provides dual left-turn lanes, three through lanes, and an exclusive right-turn lane on the northbound approach and dual left-turn lanes, three through lanes, and a shared through/right-turn lane on the southbound approach. Crosswalks and pedestrian signals are provided on the northbound and southbound approaches of this intersection. At its signalized intersection with the I-90 exit ramp, Arlington Heights Road provides an exclusive left-turn lane, two through lanes, and a shared through/right-turn lane on the northbound approach and three through lanes, and a shared through/right-turn lane on the northbound approach and three through lanes, and a shared through/right-turn lane on the northbound approach and three through lanes and a shared through/right-turn lane on the southbound approach. Arlington Heights Road is under the jurisdiction of IDOT, carries an AADT volume of 26,700 vehicles north of Algonquin Road and 38,800 vehicles south of Algonquin Road (IDOT 2021), and has a posted speed limit of 35 miles per hour in the vicinity of the site.

Tonne Road is generally a north-south, local roadway that provides one lane in each direction and currently extends through the subject site. At its signalized intersection with Algonquin Road, Tonne Road provides an exclusive left-turn lane and a shared through/right-turn lane on the northbound and southbound approaches. Crosswalks and pedestrian signals are present on both northbound and southbound approaches of this intersection. Tonne Road is under the jurisdiction of the Village of Arlington Heights.

Goebbert Road is a is a north-south, local roadway that provides one lane in each direction. At its signalized intersection with Algonquin Road, Goebbert Road provides an exclusive left-turn lane and a shared through/right-turn lane on the southbound approach and a shared left-turn/through/right-turn lane on the northbound approach. Goebbert Road is under the jurisdiction of the Village of Arlington Heights.

Interstate 90 Exit Ramp (I-90) provides two lanes along the exit ramps. At its signalized intersection with Arlington Heights Road, the I-90 exit ramp provides an exclusive left-turn lane, a shared through/left-turn lane, and dual right-turn lanes. The I-90 exit ramp is under the jurisdiction of IDOT, carries an AADT volume of 9,200 vehicles (IDOT 2020), and has a posted speed limit of 35 miles per hour.

Traffic Signal Interconnect

The signalized intersections of Arlington Heights Road with Algonquin Road, Algonquin Road with Tonne Road, and Algonquin Road with Goebbert Road are part of a twenty-one-signal coordinated system. The signals are interconnected along Arlington Heights Road from IL 72 (Higgins Road) to Central Road, along Golf Road from New Wilke Road to Busse Road, and along Algonquin Road from the Loews access drive to Goebbert Road.





Public Transportation

The study area is also served by Pace Suburban Bus Route 606 which provides daily service between the Rosemont CTA station and Woodfield Corporate Center and serves Woodfield Mall and business and commercial areas in Schaumburg, Arlington Heights, Rolling Meadows, and Mount Prospect. The bus route has several bus stops along Algonquin Road within the vicinity of the site. Notable stops include the Arlington Heights Road with Algonquin Road intersection and the Tonne Road with Algonquin Road intersection in addition to the Goebbert Road with Algonquin Road intersection.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period vehicle, pedestrian, and bicycle counts utilizing Miovision Scout Collection Units at the following intersections:

- Algonquin Road with Arlington Heights Road
- Algonquin Road with Tonne Road
- Algonquin Road with Goebbert Road
- Arlington Heights Road with the I-90 westbound off ramp
- Arlington Heights Road with the commercial access drives

The traffic counts were generally performed on Thursday, June 16, 2022, during the weekday morning (7:00 to 9:00 A.M.) and weekday evening (4:00 to 6:00 P.M.) peak periods. In addition, updated traffic counts were performed on Thursday, May 11, 2023 at the Algonquin Road/Arlington Heights Road and Algonquin Road/Tonne Road intersections. The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 7:30 A.M. to 8:30 A.M. and the weekday evening peak hour of traffic occurs from 4:30 P.M. to 5:30 P.M. It should be noted that the bicycle and pedestrian activity at any of the intersections was very low.

Figure 4 illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

Crash Data Summary

KLOA, Inc. obtained crash data¹ for the most recent available past five years (2017 to 2021) for the intersections of Algonquin Road with Arlington Heights Road, Algonquin Road with Tonne Road, and Algonquin Road with Goebbert Road. The crash data for the intersections are summarized in **Tables 1** through **3**. A review of the crash data indicated that no fatalities were reported at the study area intersections between 2017 and 2021.



¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. The author is responsible for any data analyses and conclusions drawn.

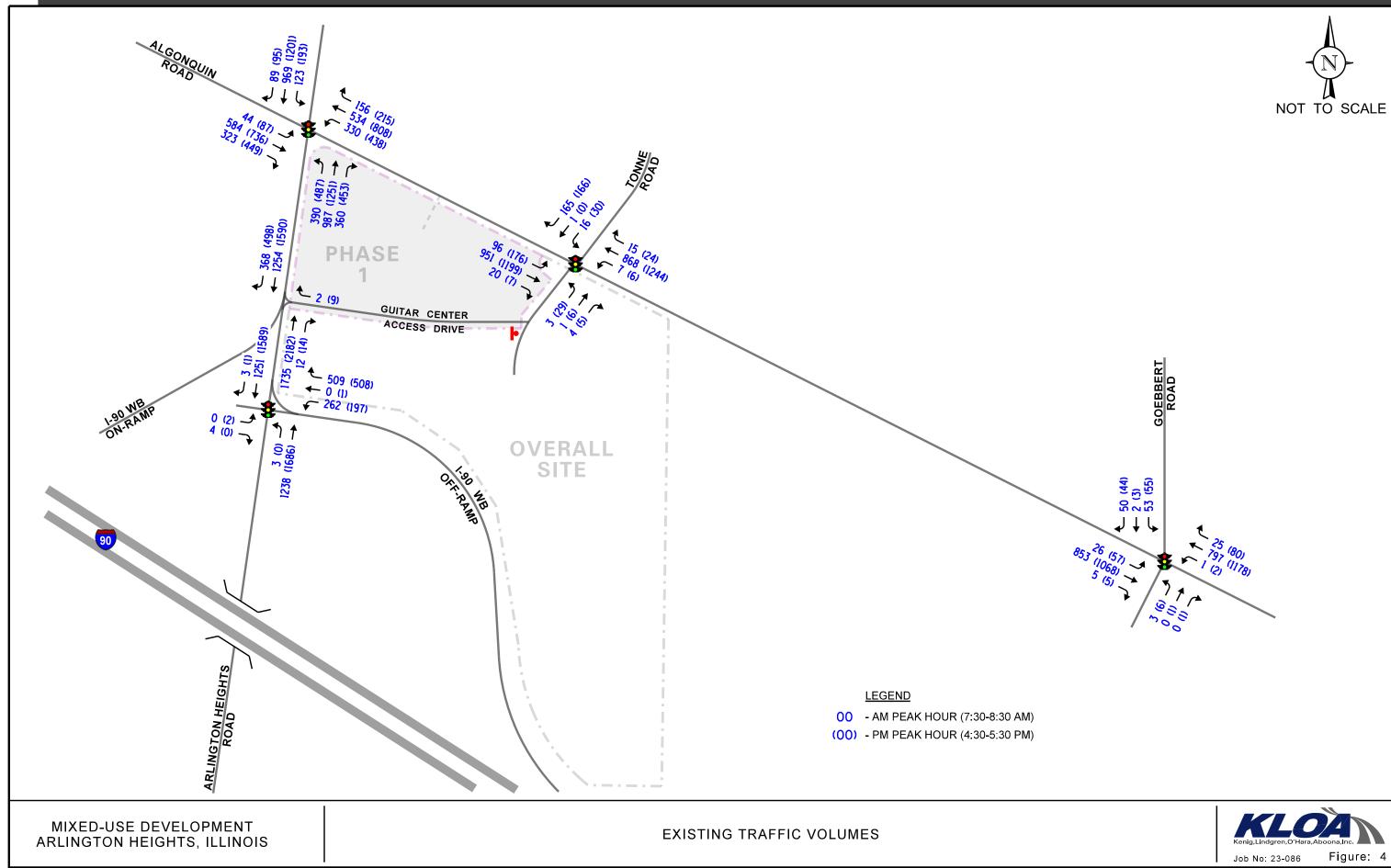




Table 1 ALGONQUIN ROAD WITH ARLINGTON HEIGHTS ROAD – CRASH SUMMARY

Year		Type of Crash Frequency									
rear	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total			
2017	0	0	0	19	4	6	0	29			
2018	0	0	0	20	1	11	0	32			
2019	2	0	1	10	0	2	1	16			
2020	0	0	0	18	3	4	1	26			
2021	<u>0</u>	<u>0</u>	<u>0</u>	<u>9</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>12</u>			
Total	2	0	1	76	8	27	2	115			
Average	<1.0		<1.0	15.2	1.6	5.4	<1.0	23.0			

Table 2

ALGONQUIN ROAD WITH TONNE ROAD- CRASH SUMMARY

Year		Type of Crash Frequency									
rear	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total			
2017	1	0	0	6	0	8	0	15			
2018	0	0	0	2	0	2	0	4			
2019	0	0	0	2	0	2	0	4			
2020	0	0	0	2	0	1	0	3			
2021	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>3</u>			
Total	1	0	0	13	0	15	0	29			
Average	<1.0			2.6		3.0		5.8			



Table 3 ALGONQUIN ROAD WITH GOEBBERT ROAD – CRASH SUMMARY

					h Frequency			
Year	Angle	Head On			Sideswipe	Turning	Other	Total
2017	1	0	1	1	0	3	0	6
2018	2	0	0	2	0	0	0	4
2019	0	0	0	1	0	1	0	2
2020	0	0	0	1	0	0	0	1
2021	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>3</u>
Total	3	0	1	7	0	5	0	16
Average	<1.0		<1.0	1.4		1.0		3.2



3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the project is to be developed in several phases with Phase 1 of the development to be located in the southeast corner of the Arlington Heights Road/Algonquin Road intersection and to consist of 301 residential units, 25,000 square feet of commercial space, and approximately 558 parking spaces. As discussed previously, the development of the future phases of the of the overall development is conceptual at this time as several parcels are under different ownership and any future phases will need to be approved by the Village. Currently, the overall development is anticipated to consist of approximately 901 residential units, a 200-room business hotel, 76,600 square feet of medical office space, 76,600 square feet of general office space, 45,000 square feet of commercial space, and approximately 2,540 parking spaces. Access to Phase 1 and the overall development will be provided via the following:

- Primary access to Phase 1 and the overall development will be provided via Tonne Road and its signalized intersection with Algonquin Road. Both approaches of Tonne Road provide a separate left-turn lane and shared through/right-turn lane. In addition, a separate left-turn lane is provided on both approaches of Algonquin Road serving Tonne Road.
- Secondary access to the development will be provided via a restricted right-turn in/rightturn out access road on Arlington Heights Road located approximately 785 feet south of Algonquin Road. As proposed, the two-lane access road is to extend from Arlington Heights Road to Tonne Road and will provide access to the Phase 1 and 3 buildings. At its intersection with Arlington Heights Road, the access road should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Arlington Heights Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/rightturn out access drives serving the site. Further, the access road will be under stop sign control at its intersection with Tonne Road.
- Secondary access to the development will be provided via a restricted right-turn in/rightturn out access drive on Algonquin Road located approximately 420 feet southeast of Arlington Heights Road. At its intersection with Algonquin Road, the access drive should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Algonquin Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/right-turn out access drives serving the site.



- Access to the Phase 2 and 4 buildings will be provided via three access drives located on the east side of Tonne Road. Each access drive should provide a minimum of one inbound lane and one outbound lane with the outbound lane under stop sign control.
- Access to the Phase 1 and 3 buildings will be provided via several access drives located on the east-west circulation road. Each access drive should provide a minimum of one inbound lane and one outbound lane with the outbound lane under stop sign control.

A copy of the site plan is included in the Appendix.

Directional Distribution

The directions from which residents, patrons, and employees will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on the following vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE):

- The Multifamily Housing Mid Rise (ITE Land-Use Code 221) trip rates were utilized for the proposed residential units.
- The Strip Retail Plaza (<40k) (ITE Land-Use Code 822) trip rates were utilized for the proposed ground floor retail space.
- The General Office Building (ITE Land-Use Code 710) trip rates were utilized for the proposed general office space.
- The Medical-Dental Office Building (ITE Land-Use Code 720) trip rates were utilized for the proposed medical office space.
- The Business Hotel (ITE Land-Use Code 312) trip rates were utilized for the proposed business hotel.

It is important to note that the traffic to be generated by the development was reduced to account for the following factors:

- The current traffic generated by the various uses that occupy the site will be eliminated with the full buildout of the development and, as such, was subtracted from the total traffic to be generated by the overall development.
- The traffic to be generated by the office and commercial portions of the development was reduced by 10 percent to account for the interaction and multi-purpose trips that will be generated by the mixed-use development.
- The traffic to be generated by the commercial portion of the overall development was reduced by 20 percent to account for pass-by trips that will be generated by the mixed-use development.



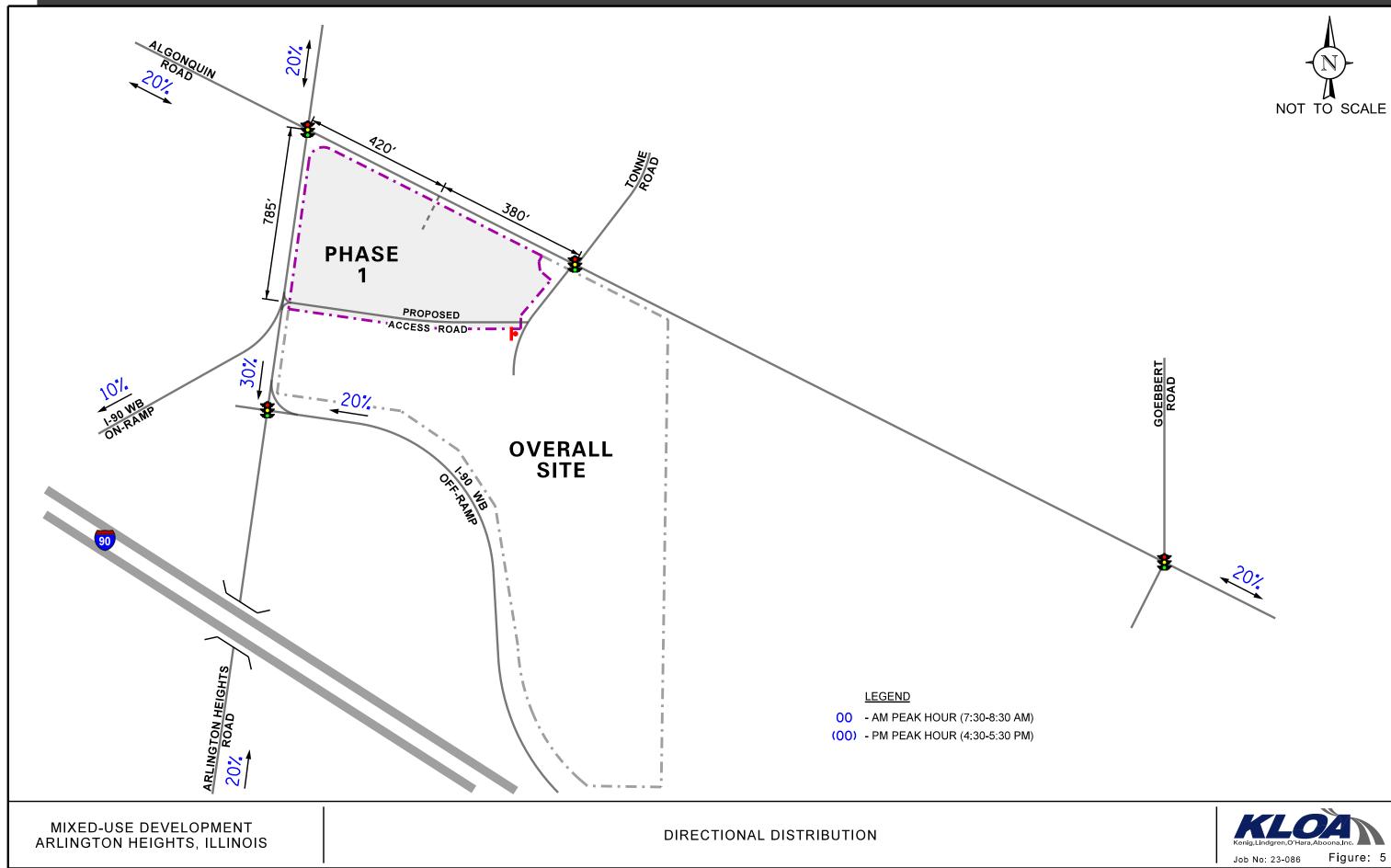




Table 4 summarizes the number of trips estimated to be generated by Phase 1 of the development and the overall development.

ITE Land Use	Type/Size		ekday M Peak Ho	0		ekday E [.] Peak Ho	<u> </u>
Code		In	Out	Total	In	Out	Total
Phase	1 of the Development						
221	Multifamily Housing (301 units)	28	93	121	72	46	118
822	Commercial (25,000 sq. ft.)	32	21	53	75	74	149
	Subtotal	60	114	174	147	120	267
	Interaction Reduction ¹	-3	-2	-5	-8	-8	-16
	Total	57	112	169	139	112	251
Total Buildout of the Development							
221	Multifamily Housing (901 units)	89	296	385	215	137	352
312	Business Hotel (200 rooms)	28	44	72	28	40	68
710	General Office (76,600 sq. ft.)	117	16	133	23	110	133
720	Medical Office (76,600 sq. ft.)	150	40	190	93	216	309
822	Commercial (45,000 sq. ft.)	47	31	78	113	113	226
	Subtotal	431	427	858	472	616	1,088
	Interaction Reduction ¹	-30	-9	-39	-30	-55	-85
	Pass-By Reduction ²	-9	-6	-15	-22	-22	-44
	Existing Traffic Volumes	-40	-10	-50	-23	-44	-67
	397	495	892				

Table 4ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

1. Assumes a 10 percent reduction in the traffic generated by the commercial and office portions of the development to account for the interaction and multi-purpose trips to be generated by the overall mixed-use development

2. Assumes a 20 precent reduction in the traffic generated by the commercial portion of the overall mixed-use development to account for pass-by trips.



4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by Phase 1 of the development and the overall development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). Figure 6 illustrates the traffic assignment of Phase 1 of the development. Figure 7 illustrates the traffic assignment for the new trips generated by the overall development and Figure 8 illustrates assignment of the pass-by trips.

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Annual Average Daily Traffic (AADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes are projected to increase by an annual compounded growth rate of approximately 0.6 percent. As such, traffic volumes were increased by four percent to represent Year 2029 no-build conditions. A copy of the CMAP projections letter is included in the Appendix.

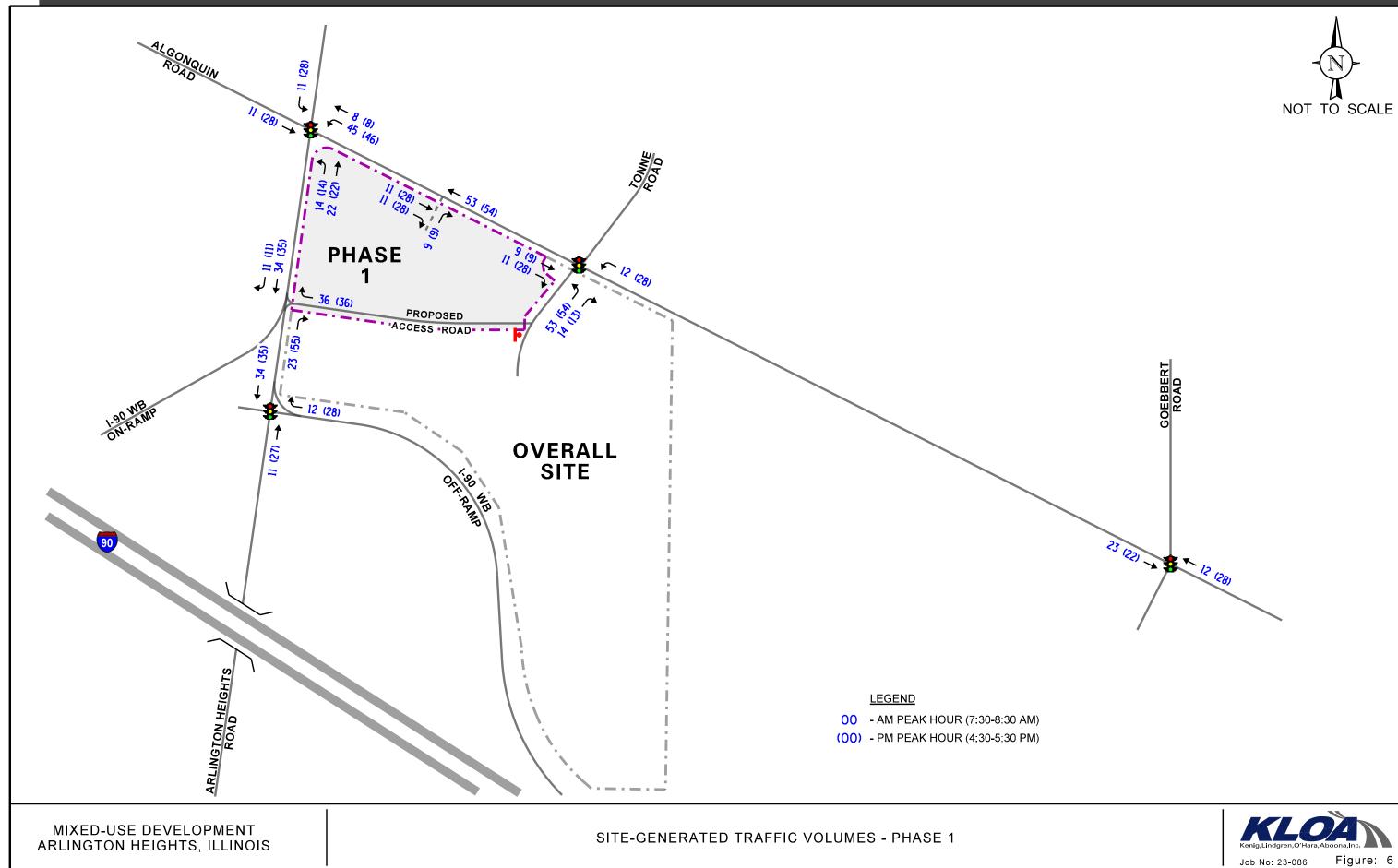
Additionally, the traffic estimated to be generated by the luxury senior housing development located in the southeast quadrant of the intersection of Arlington Heights Road with Seegers Road and the full buildout of the industrial development located in the southeast quadrant of the intersection of Algonquin Road with Meijer Drive were included in the Year 2029 no-build conditions.

The Year 2029 no-build traffic volumes, which include the existing traffic volumes increased by the regional growth factor and the traffic generated by other area developments, are illustrated in **Figure 9**.

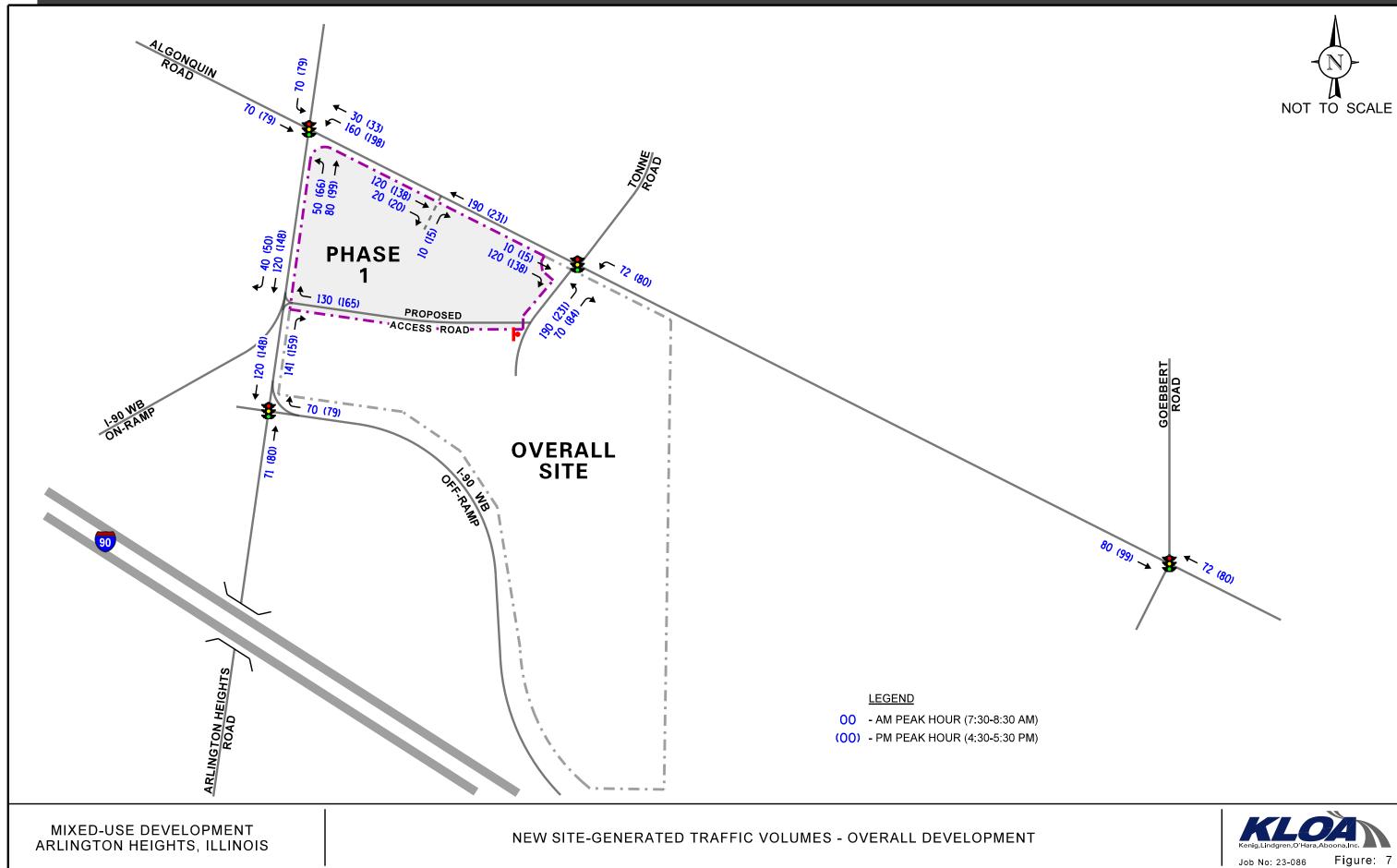
Total Projected Traffic Volumes

The development-generated traffic was added to the existing traffic volumes taking into account background growth and the traffic to be generated by other area developments to determine the Year 2029 projected traffic volumes for Phase 1 of the development (**Figure 10**) and the overall development (**Figure 11**).

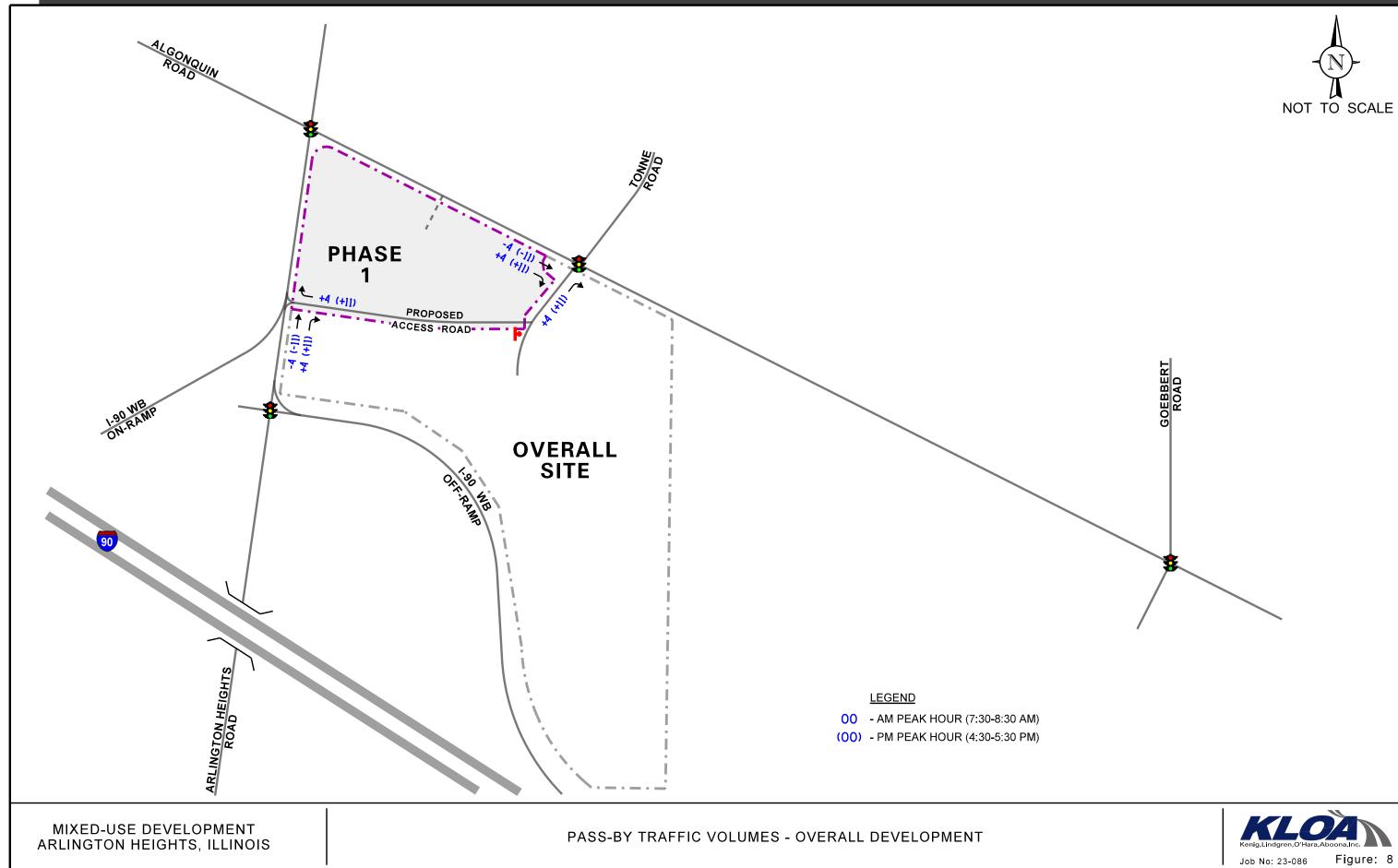




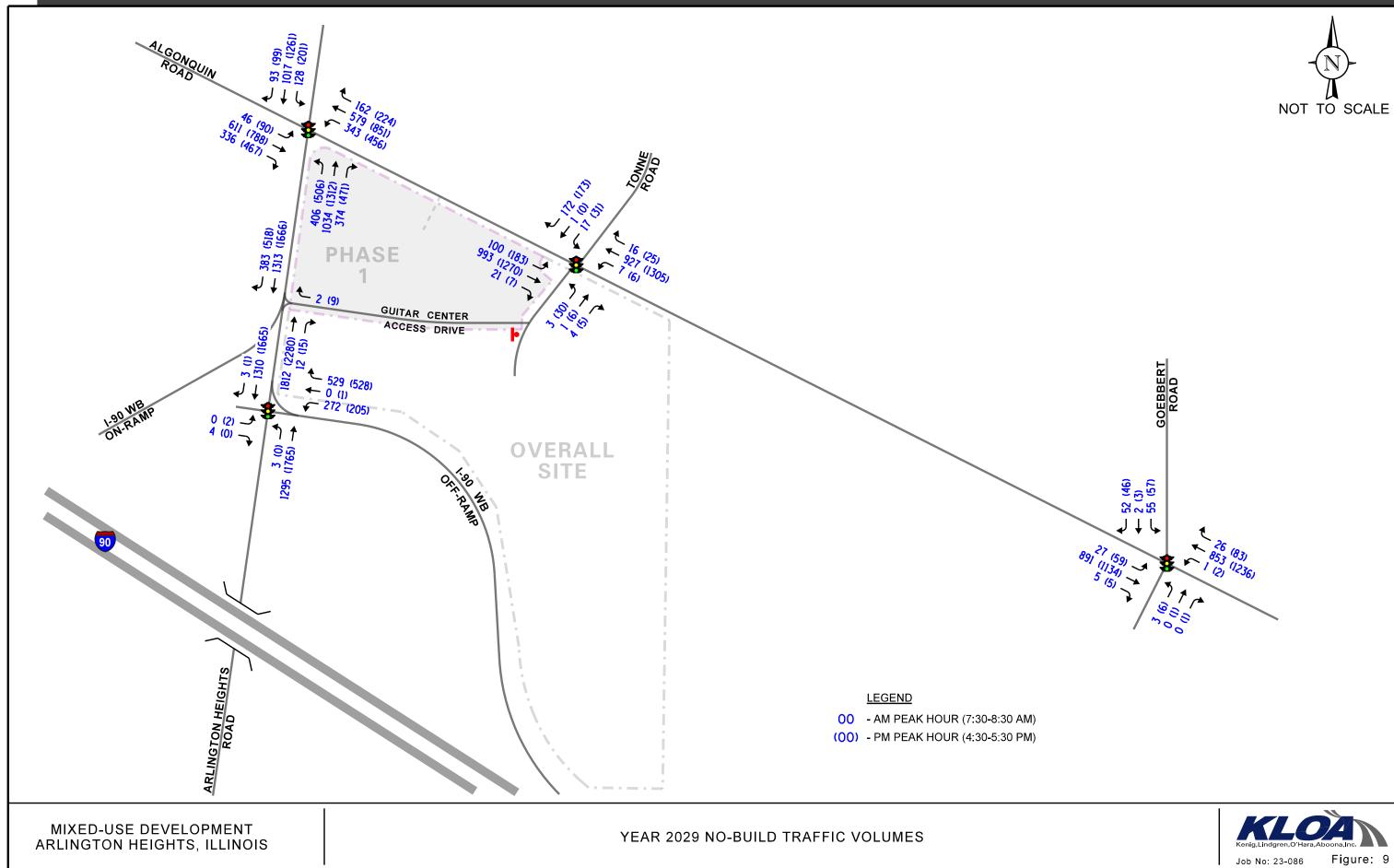




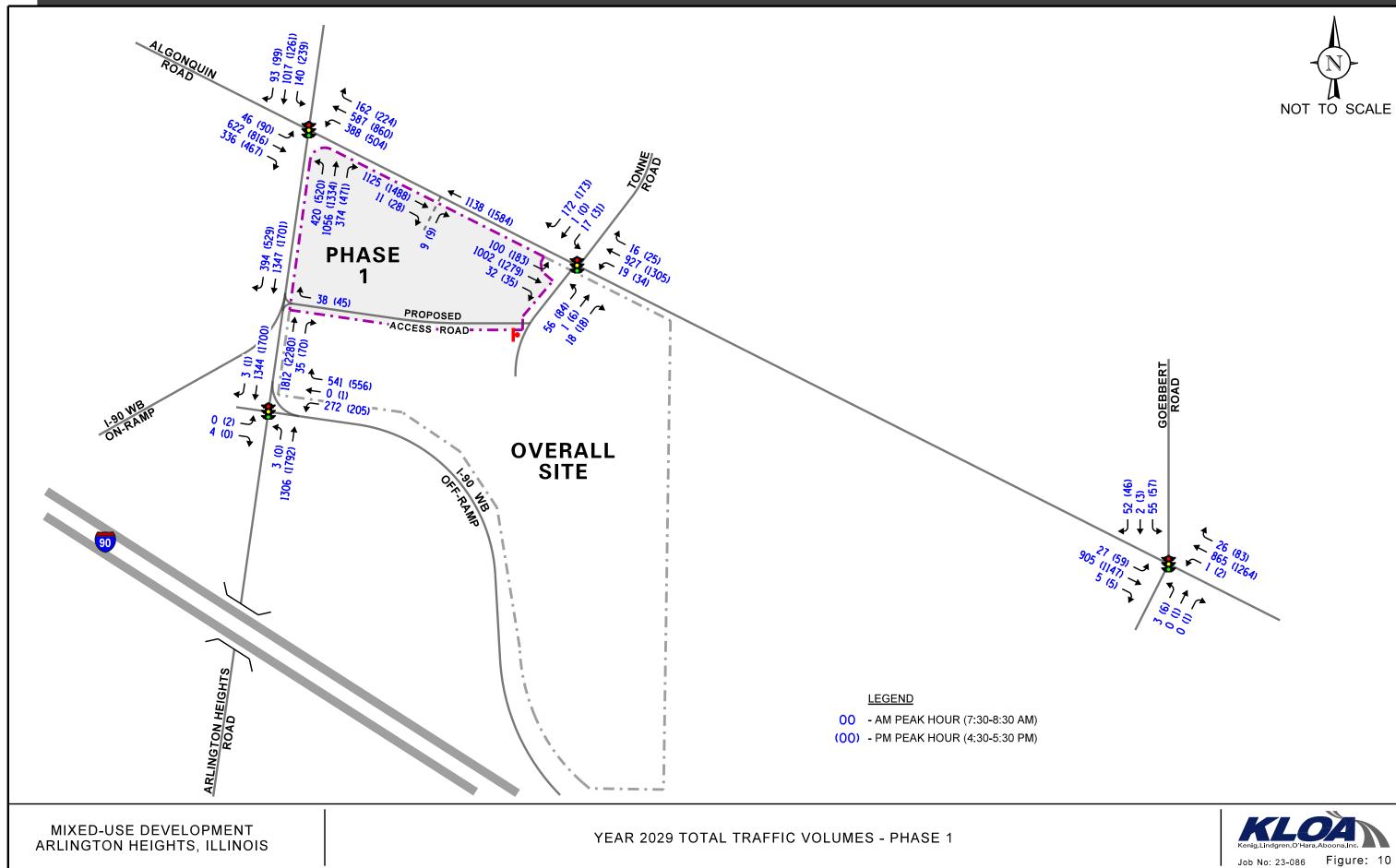




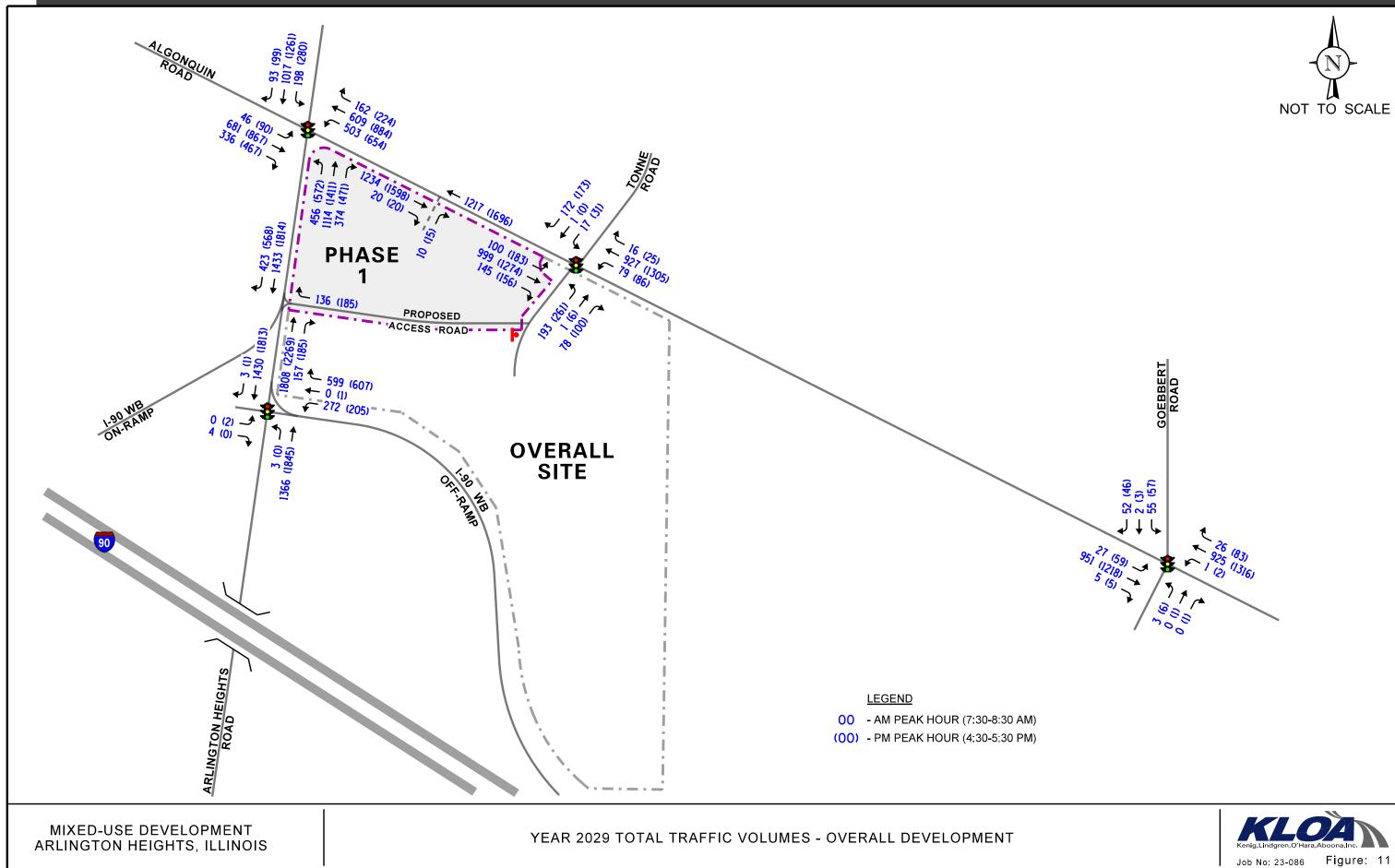














5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the Year 2023 existing, Year 2029 no-build, and Year 2029 projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersections, to determine the average overall vehicle delay and levels of service, were accomplished using utilizing actual cycle lengths and phasings.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the base, no-build, and total projected conditions are presented in **Tables 5** through **12**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.



Table 5 CAPACITY ANALYSIS RESULTS – ALGONQUIN ROAD WITH ARLINGTON HEIGHTS ROAD – SIGNALIZED

	Peak	E	astboun	d	W	Vestbour	nd	No	orthbou	nd	Sou	uthbound	Overall
	Hour	L	Т	R	L	Т	R	L	Т	R	L	T/R	Overaii
as u	Weekday	Е 72.2	D 53.9	D 35.8	E 64.9	C 33.4	C 24.2	Е 78.0	C 22.9	B 12.9	Е 75.3	D 40.8	D
ting	Morning	D-48.6			D – 42.2			C – 33.2		Γ	D – 44.4	40.8	
Existing Conditions	Weekday	Е 74.2	D 53.6	D 35.6	F 88.1	C 33.3	C 20.4	Е 57.7	D 38.6	С 27.5	Е 76.5	D 53.8	D
	Evening		D – 48.7	,		D-47.8			D-40.6	5	E	E – 56.8	47.6
No- ns	Weekday	Е 72.3	D 53.4	D 35.3	Е 65.4	C 32.7	C 22.6	Е 79.1	C 24.0	В 13.5	Е 75.5	D 43.0	D
r 2029 Build mditio	Morning		D – 48.1			D - 41.6			C - 34.2		Γ	D – 46.4	41.4
Year 2029 No Build Conditions	Weekday	Е 74.4	D 54.3	D 36.0	F 95.1	C 30.4	B 19.1	Е 57.8	D 39.7	C 28.4	Е 77.2	E 56.9	D
Y	Evening		D – 49.3			D - 48.0			D-41.3		I	E – 59.5	48.7
29 L Sd ns	Weekday	Е 72.3	D 54.1	D 35.4	Е 62.4	C 33.4	C 24.1	F 80.3	C 26.3	В 14.0	Е 76.2	D 44.8	D 42.7
20) 20) ise] ecte	Morning		D-48.7	,	D-42.0		D - 36.1		D-48.3		42.7		
Year 2029 Phase I Projected Conditions	Weekday	Е 74.4	Е 55.1	D 35.9	F 96.6	C 29.8	В 18.6	Е 59.0	D 41.7	C 29.0	F 81.7	E 58.6	D
	Evening		D – 49.9			D – 49.4			D - 43.0)	E	E – 62.1	50.3
29 dout d ns	Weekday	Е 72.3	Е 55.9	D 35.3	E 64.8	C 27.8	C 19.6	F 82.0	C 29.5	В 14.0	F 83.6	D 48.8	D 45.1
200 200 200 200 200 200 200 200 200 200	Morning		D – 50.1			D-41.4			D – 38.8			D – 54.0	43.1
Year 2029 Fotal Buildout Projected Conditions	Weekday	Е 74.4	E 56.9	D 35.5	F 99+	C 29.5	В 18.7	E 66.2	D 44.5	C 29.2	F 90.0	E 62.6	E
H	Evening		D – 51.0		E-68.4			D-45.1			E-67.3		57.4
Letter denotes Level of Service L – Left Turn R – Right Turn Delay is measured in seconds. T – Through													



	Peak		<u>s – ALGONQU</u> astbound		stbound	1	rthbound		thbound	• • •
	Hour	L	T/R	L	T/R	L	T/R	L	T/R	Overall
70	Weekday	A	A	A	B	D	D	D 520	E 70.1	В
ing tion	Morning	5.5	5.4 A-5.4	4.1 B	11.0	51.3 D	51.0 -51.1	52.9 E	79.1 - 76.8	13.9
Existing Conditions	Weekday	В	А	A	A	E	Е	Е	Е	А
C I	Evening	15.4	2.9 A-4.5	1.5	$\frac{3.0}{4-3.0}$	68.3	62.0 2 - 66.7	68.3 E	77.8 - 74.8	7.1
6	Weekday	А	А	A	А	D	D	D	Е	В
29 N ld tions	Morning	6.1	5.4 A – 5.5	4.6	<u>9.8</u> A – 9.8	51.0	50.6 0-50.8	52.6 E	79.8 - 77.5	13.5
Year 2029 No- Build Conditions	Weekday	С	А	A	А	E	Е	E	F	В
Yea C	Evening	24.9	4.1 A - 6.7	2.0	<u>5.8</u> A – 5.8	67.9 E	<u>55.8</u> 2 - 64.8	58.8 F	92.8 - 87.7	12.5
	Weekday	A	А	A	А	E	D	D	Е	В
029 e I sted ions	Morning	5.8	6.5 A - 6.4	4.3	9.6 A – 9.5	73.5 E	53.1 2 - 68.3	52.7 E	79.8 - 77.5	15.4
Year 2029 Phase I Projected Conditions	Weekday	С	А	A	А	F	Е	E	F	В
C P J	Evening	25.0	5.2 A – 7.6	2.6	<u>5.8</u> A – 5.7	99+ F	57.4 F - 99+	58.7 F	91.3 - 86.3	Б 15.4
		А	B	A	B	F	D	D	E	C
029 Idou ted ons	Weekday Morning	7.5	11.4 B – 11.1	7.4 P	11.8	99+	54.2 5-92.8	50.5	58.8 - 58.1	C 22.6
Year 2029 Total Buildout Projected Conditions		С	А	A	А	F	E	E	F	
Ye Fota Pr Co	Weekday Evening	24.6	5.6	5.7	6.2	99+	71.1	59.9	84.8	E 67.6
	C		A – 7.7		A - 6.2	F	F-99+	F	- 81.0	
Letter denotes I Delay is measur			L – Left Turn T – Through	R – Right	lurn					

Table 6 CAPACITY ANALYSIS RESULTS – ALGONQUIN ROAD WITH TONNE ROAD – SIGNALIZED

Proposed Mixed-Use Development Arlington Heights, Illinois



CAPACITY	ANAL Y SIS	-				<u> BBERT ROAD – SIG</u>			
		E	astbound	W	estbound	Northbound	So	uthbound	
	Peak Hour	L	T/R	L	T/R	L/T/R	L	T/R	Overall
		Α	А	A	А		E	Е	
g	Weekday Morning	3.0	4.9	5.0	4.9	E-61.0	79.0	74.7	A 9.1
Existing Conditions	Morning		A-4.8		A - 4.9]	E – 76.9	9.1
Exi	Weekday	А	А	Α	А	Е	E	E	A
C C	Evening	2.9	3.2	5.0	6.5	62.8	78.5	71.5	8.0
	8		A – 3.5		A - 6.5			E – 75.3	
<u>-</u>	Weekday	A 1.6	A 3.9	A 4.0	A 4.9	Е	F 85.9	Е 79.5	А
9 N L ions	Morning			4.0		63.7	-		8.9
202) uild	0		A – 3.8		A – 4.9		_	F – 82.8	
Year 2029 No- Build Conditions	Weekday	A	A	A	A	Е	E	E	А
Ye	Evening	3.1	3.5 A-3.4	5.0	6.8 A - 6.8	62.4	78.7	71.6 E – 75.4	8.2
				•	1		F	E – 73.4 E	
9 e 1 IS	Weekday	A 1.6	A 3.7	A 4.0	A 5.0	Е	г 85.9	Е 79.5	А
Year 2029 Total Phase 1 Conditions	Morning		A-3.7		A - 5.0	63.7		F – 82.8	8.8
ar 2 1 Pl ndit		Α	A	А	A		E	E	
Ye ota Co	Weekday	3.3	3.4	5.0	6.9	E	78.7	71.6	A
H	Evening		A – 3.4		A – 6.9	62.4]	E-75.4	8.2
it		Α	А	A	А	F	F	F	
29 dou ns	Weekday Morning	1.8	4.8	4.0	5.3	E 64.7	90.6	81.9	A 8.4
20) Suile Litio	Morning		A – 4.7		A - 5.3	04.7]	F – 86.4	0.4
Year 2029 Total Buildout Conditions	Wooldon	А	А	Α	A	E	E	Е	٨
CC CC	Weekday Evening	3.3	3.0	5.0	7.0	E 62.4	78.7	71.6	A 8.0
-	Ŭ		A – 3.0		A – 7.0	02.4]	E – 75.4	0.0
	es Level of Servic sured in seconds		L – Left Turn T – Through	R – Right	Turn				
Delay is mea	sured in seconds.	•							

Table 7 CAPACITY ANALYSIS RESULTS – ALGONQUIN ROAD WITH GOEBBERT ROAD – SIGNALIZED

Proposed Mixed-Use Development Arlington Heights, Illinois



Table 8

Eastbound Westbound Northbound Southbound **Peak Hour** Overall L/T/RL R L T/R L/T/RТ D D Е Е В Weekday Е С А **Existing** Conditions 49.5 49.5 70.3 65.7 12.8 7.7 Morning 69.8 22.2 E - 60.2B - 12.9Е B D D Е В С Weekday --48.3 48.2 58.8 14.2 21.0 Evening 67.5 12.6 E-55.9 B – 14.2 D Е Е В D Year 2029 No-С Weekday Е Α 70.3 13.8 Conditions 48.4 48.4 63.9 8.1 22.2 Morning 69.8 Build E - 58.6B – 13.9 D Е D В Weekday С E B --47.4 57.8 47.3 15.3 Evening 67.5 13.8 21.7 D - 54.8B - 15.3D Е Е В D **Total Phase 1** Weekday Е С Α 47.6 63.1 70.3 47.6 14.2 Conditions **Year 2029** Morning 69.8 9.2 22.6 E - 57.9B - 14.3D D E B Weekday Е В С --47.3 47.4 59.6 15.5 **Evening** 67.5 14.1 22.3 B-15.5 E - 56.3Е Е D D В **Total Buildout** Е В С Weekday 43.0 43.0 55.3 70.3 17.8 **Conditions Year 2029** Morning 69.8 13.0 24.0 B – 17.9 D-51.5 Е D D В Weekday Е В С --47.3 47.4 64.5 15.7 **Evening** 67.5 16.4 24.1 E - 60.1B - 15.7Letter denotes Level of Service R – Right Turn L – Left Turn

CAPACITY ANALYSIS RESULTS - ARLINGTON HEIGHTS ROAD WITH I-90 WB OFF RAMP - SIGNALIZED

Proposed Mixed-Use Development Arlington Heights, Illinois

T – Through

Delay is measured in seconds.



Table 9 CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	•	v Morning Hour	Weekday Evening Peak Hour		
	LOS	Delay	LOS	Delay	
Arlington Heights Road with Right-In/R	Right-Out Ac	cess Drive			
• ICU Level of Service	А	43.8%	А	52.5%	
LOS = Level of Service; delay is measured in secon The operation of this intersection is based on a critic the Intersection Capacity Utilization (ICU) method.	cal volume to sa	turation flow (v/	s) evaluation al	so known as	

Table 10

CAPACITY ANALYSIS RESULTS - NO-BUILD CONDITIONS - UNSIGNALIZED

Intersection		y Morning x Hour	Weekday Evening Peak Hour						
	LOS	Delay	LOS	Delay					
Arlington Heights Road with Right-In/R	aight-Out Ac	cess Drive							
ICU Level of Service	А	45.3%	А	54.4%					
$\frac{1}{1000} = 1000 \text{ Level of Service; delay is measured in seconds.}$ The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.									



Table 11 CAPACITY ANALYSIS RESULTS – YEAR 2029 PHASE 1 PROJECTED CONDITIONS UNSIGNALIZED

Intersection	v	Morning Hour		y Evening Hour
	LOS	Delay	LOS	Delay
Arlington Heights Road with Right-In/Ri	ght-Out Acc	ess Drive ¹		
ICU Level of Service	А	45.8%	В	55.6%
Algonquin Road with Right-Out Only Ac	cess Drive			
Northbound Approach	В	14.6	С	18.0
LOS = Level of Service; delay is measured in second 1 - The operation of this intersection is based on a cr the Intersection Capacity Utilization (ICU) method.		saturation flow ((v/s) evaluation a	also known as

Table 12 CAPACITY ANALYSIS RESULTS YEAR 2029 TOTAL BUILDOUT PROJECTED CONDITIONS - UNSIGNALIZED

Intersection	·	' Morning Hour	Weekday Evening Peak Hour		
	LOS	Delay	LOS	Delay	
Arlington Heights Road with Right-In/Ri	ight-Out Acc	ess Drive ¹			
ICU Level of Service	А	53.5%	С	66.1%	
Algonquin Road with Right-Out Only Ac	cess Drive				
Northbound Approach	С	15.6	С	19.4	
LOS = Level of Service; delay is measured in second		saturation flow ((v/s) evaluation :	also known as	

1 - The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.



Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Algonquin Road with Arlington Heights Road

The results of the capacity analysis indicate that that this signalized intersection currently operates at an overall Level of Service (LOS) D during the weekday morning peak hour and weekday evening peak hour. All of the intersection movements operate at LOS D or better during both peak hours except the left-turn movements, which currently operate at LOS E/F. The lower level of service is due to the fact that the left-turn movements operate on a protected phase only and receive a limited amount of green time as well as the long cycle length of the traffic signal.

Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS D during the weekday morning peak hour and weekday evening peak hour. Further, all of the movements are projected to operate at LOS D or better during both peak hours except the left-turn movements, which are projected to operate at LOS E/F, and the southbound through movement, which is projected to operate at LOS E during the evening peak hour.

Under Year 2029 Phase 1 total conditions, this intersection is projected to continue to operate at an overall LOS D during the weekday morning and weekday evening peak hours. Further, all of the movements are projected to continue to operate at LOS D or better during both peak hours except the left-turn movements, which are projected to continue to operate at LOS E/F, and the southbound and eastbound through movements, which are projected to operate on the threshold between LOS D and E during the evening peak hour. As such, this intersection generally has sufficient reserve capacity to accommodate the traffic to be generated by Phase 1 of the development and no roadway improvements or traffic control modifications are required.

If the Year 2029 overall development projected traffic volumes are realized, this intersection is projected to continue to operate at an overall LOS D during the weekday morning peak hour and on a threshold between LOS D and E during the weekday evening peak hour. Further, all of the movements are projected to continue to operate at LOS D or better during both peak hours except the left-turn movements, which are projected to continue to operate at LOS E/F, and the southbound and eastbound through movements, which are projected to continue to operate at LOS E. If the Year 2029 overall development projected traffic volumes are realized, the traffic signal timings at this intersection should reoptimized.



Algonquin Road with Tonne Road

The results of the capacity analysis indicate that that this signalized intersection currently operates at an overall LOS B during the weekday morning peak hour and LOS A during the weekday evening peak hour. All of the intersection movements operate at LOS D or better during both peak hours except a few of the Tonne Road movements, which currently operate at LOS E. The lower level of service is due to the fact that the Tonne Road movements receive a limited amount of green time and the long cycle length of the traffic signal.

Under Year 2029 no-build conditions, this intersection is projected to operate at an overall LOS B during the weekday morning and weekday evening peak hours. Further, all of the movements are projected to operate at LOS D or better during both peak hours except a few of the Tonne Road movements, which are projected to operate at LOS E or F.

Under Year 2029 Phase 1 total conditions, this intersection is projected to continue to operate at an overall LOS B during the weekday morning and weekday evening peak hours. Further, all of the movements are projected to continue to operate at LOS D or better during both peak hours except a few of the Tonne Road movements, which are projected to operate at LOS E or F. It should be noted that the Tonne Road northbound left-turn movement is projected to operate at a poor level of service with longer delays and queues during the weekday evening peak hour. The Tonne Road movements are projected to operate significantly better with the reallocation of four to five seconds of green time from the Algonquin Road approaches to the Tonne Road approaches as shown in Table 13. With the reallocation of the green time during the evening peak hour, the northbound left-turn movement is projected to operate at LOS E with an estimated delay of 72.3 seconds and the southbound through/right-turn movement is projected to operate at LOS D. The lower level of service for the northbound left-turn movement is due in part to the fact that the Tonne Road movements receive a limited amount of green time and the long cycle length of the traffic signal. This is evident in the fact that the northbound left-turn movement is projected to have a volume to capacity (V/C) ratio of 0.58 and a 95th percentile queue of 150 feet assuming the reallocation of the green time. As such, this intersection has sufficient reserve capacity to accommodate the additional traffic to be generated by Phase 1 of the development and no roadway improvements are required other than the optimization of the traffic signal timings.

Under Year 2029 overall development total conditions, this intersection is projected to operate at an overall LOS C during the weekday morning peak hour and LOS E during the weekday evening peak hour. Further, the Tonne Road northbound left-turn movement is projected to operate at a very poor level of service with longer delays and queues during the weekday evening peak hour. If the Year 2029 overall development traffic volumes are realized, the intersection will need to be improved (1) to provide dual left-turn lanes on the northbound and southbound approaches of Tonne Road and (2) the traffic signal will need to be modified to provide a separate left-turn phase for northbound and southbound Tonne Road. With the improvements, the intersection is projected to operate at an overall LOS B (see Table 13) during the weekday morning and evening peak hours. Further, all of the movements are projected to operate at LOS D or better during both peak hours except the Tonne Road northbound left-turn movement and the southbound through/right-turn movement, which are projected to operate at LOS E.



Table 13 CAPACITY ANALYSIS RESULTS – ALGONQUIN ROAD WITH TONNE ROAD – SIGNALIZED PROPOSED SIGNAL MODIFICATIONS AND GEOMETRIC IMPROVEMENTS

Peak	E	astbound	Westbound Northbound		rthbound	Southbound		Overall	
Hour	L	T/R	L	T/R	L	T/R	L	T/R	Overall
Weekday	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n 0
Morning		n.a.		n.a.		n.a.		n.a	n.a.
XX 7 1 1	С	А	А	А	Е	С	D	В	D
v	30.4	6.9	3.9	8.6	72.6	25.0	53.5	14.1	B
Evening		A – 9.8		A – 8.5		E – 62.1	C - 20.1		11.7
XX 7 1 .1.	А	В	А	В	Е	В	Е	С	D
v	7.3	11.6	7.3	11.4	67.7	14.7	74.5	21.3	B
Morning]	B – 11.3	E	B – 11.1		D – 52.3		2 - 25.9	16.3
	С	А	А	В	Е	В	Е	D	
v	33.9	9.6	9.7	11.2	72.8	16.2	77.0	40.5	B
Evening]	B – 12.4	B-11.1 E-56.6			E – 56.6	D	0-46.1	18.3
			R – Right	Turn					
	Weekday MorningWeekday EveningWeekday MorningWeekday Evening	Weekday Morningn.a.Weekday EveningC 30.4Weekday MorningA 7.3Weekday MorningC 33.9Weekday EveningC 33.9	Weekday Morningn.a.n.a.Weekday EveningCAMeekday Evening $A - 9.8$ Weekday MorningAB11.6Weekday MorningBD $A - 9.8$ Weekday MorningBB11.3Weekday EveningCB-12.4EveningB	Weekday Morning n.a. n.a. n.a. Weekday Evening C A A Weekday Evening C A A Morning A - 9.8 A Weekday Morning A B A Weekday Morning A B A B - 11.3 E B A Weekday Morning C A A B - 11.3 E B B Weekday Morning B - 12.4 E E	Weekday Morning n.a. n.a. n.a. n.a. Weekday Evening C A A A Meekday Evening C A A A Meekday Evening A B A B Meekday Morning A B A B Meekday Morning A B A B Veekday Morning A B A B Veekday Morning B A B B B 11.6 7.3 11.4 B B B B B B B Weekday Morning C A A B B 3.9 9.6 9.7 11.2 Evening B 12.4 B 11.1	Weekday Morning n.a. n.a. n.a. n.a. n.a. Weekday Evening C A A A E $Weekday$ Evening C A A A E $Weekday$ Evening A - 9.8 A - 8.5 E $Weekday$ Morning A B A B E $Weekday$ Morning A B A B E $Weekday$ Morning A B A B E $Weekday$ Morning B - 11.3 B - 11.1 D D $Weekday$ Morning C A A B E $B - 11.3$ B - 11.1 D D D D D $Weekday$ Evening B - 12.4 B - 11.1 E D D D	Weekday Morning n.a. n.a. n.a. n.a. n.a. n.a. n.a. Weekday Evening C A A A E C Meekday Evening C A A A E C Meekday Morning C A A A E C Meekday Morning A B A B E B Meekday Morning A B A B E B Meekday Morning C A A B E B Meekday Morning C A B A B E B Morning C A A B E B B A B E B 7.3 11.6 7.3 11.1 D-52.3 D-52.3 B 16.2 B B B B B B E B 16.2 E 56.6	Weekday Morning n.a. n.a.	Weekday Morning n.a. n.a.

1. The Year 2029 Phase 1 Projected Conditions assumes the relocation of approximately five seconds of green time from the Algonquin Road approaches to the Tonne Road approaches during the weekday evening peak hour.

2. The Year 2029 Total Buildout Projected Conditions assumes the addition of a second left-turn lane on the northbound approach of Tonne Road and modifications to the traffic signal timings and phasing.

Algonquin Road with Goebbert Road

The results of the capacity analysis indicate that that this signalized intersection currently operates at an overall LOS A during the weekday morning and weekday evening peak hours. All of the Algonquin Road movements operate at LOS A and the Goebbert Road movements operate at LOS E. The lower level of service is due to the fact that the Goebbert Road movements receive a limited amount of green time and the long cycle length of the traffic signal.

Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning and weekday evening peak hours. All of the Algonquin Road movements are projected to continue to operate at LOS A and the Goebbert Road movements are projected to continue to operate at LOS E or F.

Under Year 2029 Phase 1 and overall development total conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning and weekday evening peak hours. Further, All of the Algonquin Road movements are projected to continue to operate at LOS A and the Goebbert Road movements are projected to continue to operate at LOS E or F. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by Phase 1 and the overall development and no roadway improvements or traffic control modifications are required.

Arlington Heights Road with the I-90 Westbound Off Ramp

The results of the capacity analysis indicate that that this signalized intersection currently operates at an overall LOS C during the weekday morning and weekday evening peak hours. All of the intersection movements operate at LOS D or better during both peak hours except the I-90 westbound ramp movements and the access drive, which currently operate at LOS E. The lower level of service is due to the fact that the I-90 westbound ramp movements and the access drive receive a reduced amount of green time and the long cycle length of the traffic signal.

Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning and weekday evening peak hours. Further, all of the movements are projected to operate at LOS D or better during both peak hours except the I-90 westbound ramp movements and the access drive, which are projected to continue to operate at LOS E.

Under Year 2029 Phase 1 and overall development total conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning and weekday evening peak hours. Further, all of the movements are projected to continue to operate at LOS D or better during both peak hours except the I-90 westbound ramp movements and the access drive, which are projected to continue to operate at LOS E. As such, this intersection has sufficient reserve capacity to accommodate the traffic to be generated by Phase 1 and the overall buildout of the development and no roadway improvements or traffic control modifications are required.



Arlington Heights Road with Access Drive

Because of the traffic control configuration of this intersection, the intersection could not be analyzed using HCM procedures and was analyzed using the Intersection Capacity Utilization (ICU) level of service. The ICU indicates how much reserve capacity is available or how much an intersection is over capacity.

Based on the ICU analysis, the intersection currently operates at LOS A utilizing approximately 40 to 45 percent of the capacity of the intersection during the weekday morning peak hour and operates at LOS A utilizing approximately 50 to 55 percent of the capacity of the intersection during the weekday evening peak hour.

Secondary access to the development will be provided via a restricted right-turn in/right-turn out access road on Arlington Heights Road located approximately 785 feet south of Algonquin Road. At its intersection with the Arlington Heights Road, the access road should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Arlington Heights Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/right-turn out access drives serving the site.

Under Year 2029 Phase 1 and overall development total conditions, this intersection is projected to operate at LOS A during the weekday morning peak hour utilizing 45 to 54 percent of the capacity of the intersection and LOS B/C during the weekday evening peak hour utilizing 55 to 66 percent of the capacity of the intersection.

Algonquin Road with Proposed Right-Out Access Drive

Secondary access to the development will be provided via a restricted right-turn in/right-turn out access drive on Algonquin Road located approximately 420 feet southeast of Arlington Heights Road. At its intersection with Algonquin Road, the access drive should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Algonquin Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/right-turn out access drives serving the site.

Under 2029 Phase 1 and overall development total conditions, the northbound approach will operate at LOS C or better during the weekday morning and weekday evening peak hours. As a result, the access drive will operate efficiently with limited impact on Algonquin Road.





6. Parking Analysis

As proposed, the project is to be developed in several phases with the first phase of the development to consist of 301 residential units, 25,000 square feet of commercial space, and approximately 558 parking spaces. The overall development is currently anticipated to consist of approximately 901 residential units, a 200-room business hotel, 76,600 square feet of medical office space, 76,600 square feet of general office space, 45,000 square feet of commercial space, and approximately 2,540 parking spaces.

The parking demand of the first phase of the development and the overall development was determined based on the (1) Village of Arlington Heights requirements and (2) parking rates provided in the ITE *Parking Generation Manual*, 6^{th} Edition.

Village of Arlington Heights Requirements

Per the Village of Arlington Heights Zoning Ordinance and the South Arlington Heights Road Overlay District, **Table 14** shows the parking that is required for both Phase 1 of the development and the overall development. It should be noted that the Village's requirements provide for a worst-case scenario, as they do not take into consideration (1) the shared parking that will occur between the various uses and (2) the mixed-use nature (interaction) of the development. For example, the residential and hotel peak parking demand occurs at night while the peak parking demand for the commercial and the general/medical office occurs during the day. Further, it is anticipated that many residents or guests of the hotel will walk to the commercial uses or work or use the services of the general/medical office. Nevertheless, with a total of 558 parking spaces proposed as part of Phase 1 and 2,540 parking spaces proposed as part of the overall development, it can be seen that the parking to be provided by the development meets the requirements of the Village of Arlington Heights.

Peak Parking Demand per ITE Parking Generation Rates

The peak parking demand of Phase 1 and the overall development was also determined based on the following parking generation rates contained in ITE *Parking Generation Manual*, 6th Edition:

- The Multifamily Housing (Mid-Rise) (ITE Land-Use Code 221) parking rates
- The Hotel (ITE Land-Use Code 310) parking rates
- The Medical-Dental Office Building (ITE Land-Use Code 720) parking rates
- The Shopping Center (ITE Land-Use Code 820) parking rates

Table 15 shows the estimated peak parking demand for the first phase of the development and the overall development. With a total of 558 parking spaces proposed as part of Phase 1 and 2,540 parking spaces proposed as part of the overall development, it can be seen that the parking to be provided by the development meets the estimated peak parking demand of the development based on the ITE parking rates.



As discussed above, it is important to note that the peak parking demand determined based on the ITE parking rates provides for a worst-case estimate, as it does not take into consideration (1) the shared parking that will occur between the various uses and (2) the mixed-use nature (interaction) of the development. For example, the estimated peak parking demand (1,099 vehicles) of the residential portion of the development will occur during the overnight hours when the medical office and commercial portions of the development are closed. The 901 residential units are estimated to have a peak parking demand between 540 to 735 vehicles during weekday days (9:00 A.M. to 5:00 P.M.), which is approximately 0.33 to 0.50 percent less than the peak parking demand. As such, the actual parking demand of the overall development is projected to be less than that shown in Table 14.

Table 14

PARKING REQUIREMENTS PER THE VILLAGE OF ARLINGTON HEIGHTS ZONING ORDINANCE

Land Use	Size	Requirements	Parking Spaces
Phase 1			
Residential – Studios	49 units	1 space per unit	49
Residential – 1 Bedroom	157 units	1.5 spaces per unit	236
Residential – 2/3 Bedroom	95 units	2 spaces per unit	190
Commercial	25,000 s.f.	1 space per 300 square feet	83
Total			558
Total Development			
Residential – Studios	147 units	1 space per unit	147
Residential – 1 Bedroom	470 units	1.5 spaces per unit	705
Residential – 2/3 Bedroom	285 units	2 spaces per unit	570
Commercial	45,000 s.f.	1 space per 300 square feet	150
Hotel	200 keys	1 space per key	200
Office	153,200	1 space per 300 square feet	766
Total			2,538



Table 15 ESTIMATED PEAK PARKING DEMAND PER ITE PARKING GENERATION MANUAL

I and Use	C:	Parking Dema	and (Vehicles)
Land Use	Size	Weekday	Weekend
Phase 1			
Residential	301 units	395	367
Commercial	25,000 s.f.	138	109
Total		533	476
Total Development			
Residential	901 units	1,199	1,099
Commercial	45,000 s.f.	167	164
Hotel	200 keys	161	223
Office	153,200	506	86
Total		2,033	1,572



7. Conclusion

Based on existing conditions and the traffic capacity analyses for the full buildout of the development, the findings and recommendations of this study are outlined below:

- The volume of traffic to be generated by the development will be reduced to account for pass-by trips and multi-purpose trips as well as the fact that some of the uses on the site are operating and generating traffic.
- Access to the development is to be provided via the following three access drives:
 - Primary access to the overall development and Phase 1 will be provided via Tonne Road and its signalized intersection with Algonquin Road. Both approaches of Tonne Road provide a separate left-turn lane and shared through/right-turn lane. In addition, a separate left-turn lane is provided on both approaches of Algonquin Road serving Tonne Road.
 - Secondary access to the development will be provided via a restricted right-turn in/right-turn out access road on Arlington Heights Road located approximately 785 feet south of Algonquin Road. As proposed, the two-lane access road is to extend from Arlington Heights Road to Tonne Road and will provide access to the Phase 1 and 3 buildings. At its intersection with Arlington Heights Road, the access road should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Arlington Heights Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/right-turn out access drives serving the site. Further, the access road will be under stop sign control at its intersection with Tonne Road.
 - Secondary access to the development will be provided via a restricted right-turn in/right-turn out access drive on Algonquin Road located approximately 420 feet southeast of Arlington Heights Road. At its intersection with Algonquin Road, the access drive should provide one inbound lane and one outbound lane that will be restricted to right-turn movements only due to the barrier median along Algonquin Road. The outbound lane will be under stop sign control. It is important to note that the access road will replace the four existing right-turn in/right-turn out access drives serving the site.
 - Access to the Phase 2 and 4 buildings will be provided via three access drives located on the east side of Tonne Road. Each access drive should provide a minimum of one inbound lane and one outbound lane with the outbound lane under stop sign control.



- Access to the Phase 1 and 3 buildings will be provided via several access drives located on the east-west circulation road. Each access drive should provide a minimum of one inbound lane and one outbound lane with the outbound lane under stop sign control.
- The proposed access system will provide flexible and efficient access to and from the site.
- The roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by Phase 1 of the development. Other than traffic signal timing adjustments that may be required at the Algonquin Road/Tonne Road intersection, no other roadway improvements or traffic control modifications are required.
- If the Year 2029 total projected traffic volumes assuming the overall development are realized, the following improvements will be required:
 - The traffic signal timings at the Algonquin Road/Arlington Heights Road intersection will need to reoptimized.
 - Dual left-turn lanes will be required on the northbound and southbound approaches of Tonne Road at its intersection with Algonquin Road and the traffic signal will need to be modified to provide a separate left-turn phase for northbound and southbound Tonne Road.
- Phase 1 of the development is proposed to provide approximately 558 parking spaces and the overall development is proposed to provide approximately 2,540 parking spaces. The total number of parking spaces to be provided in Phase 1 and the overall development (1) meet the requirements of the Village of Arlington Heights and (2) exceed the estimated peak parking demand based on ITE parking generation rates.



Appendix

Traffic Count Summary Sheets Site Plan CMAP Projections Letter Level of Service Criteria Capacity Analysis Summary Sheets Algonquin Road with Tonne Road Intersection – Traffic Signal Modifications and Improvements Traffic Count Summary Sheets

Thu Jun 16, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM, 11:30 AM-2 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 966117, Location: 42.044284, -87.983099



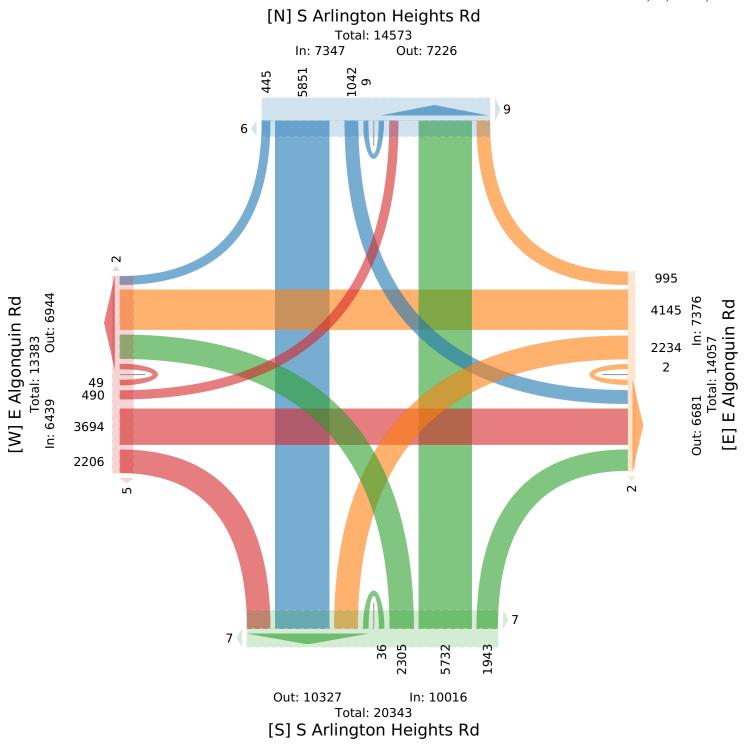
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Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	E Algo	•	٦d				E Algor	•	ld				S Arlin	-	eights R	d			S Arling	-	eights R	d			
Direction	Eastbou						Westbo						Northbo	ound					Southbo						
Time	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-16																									
7:00AM	72	121	6	2	201	2	25	72	83	0	180	0	55	147	69	0	271	1	19	197	22	1	239	1	891
7:15AM	71	110	7	3	191	0	30	117	62	0	209	0	51	166	65	1	283	0	17	218	28	0	263	1	946
7:30AM	98	142	10	1	251	0	26	125	82	0	233	0	62	213	87	0	362	0	16	218	41	0	275	1	1121
7:45AM	86	154	6	0	246	0	30	117	92	0	239	0	83	252	102	1	438	0	22	281	41	0	344	0	1267
Hourly Total	327	527	29	6	889	2	111	431	319	0	861	0	251	778	323	2	1354	1	74	914	132	1	1121	3	4225
8:00AM	76	106	16	0	198	0	31	101	66	0	198	0	74	179	79	1	333	0	24	245	32	0	301	1	1030
8:15AM	75	118	10	4	207	0	42	125	81	0	248	0	64	200	93	0	357	0	15	222	32	0	269	0	1081
8:30AM	81	112	8	3	204	0	42	104	74	0	220	0	63	203	89	0	355	0	16	200	27	0	243	0	1022
8:45AM	57	119	8	1	185	0	35	132	66	0	233	0	53	212	78	2	345	0	10	200	30	2	242	2	1005
Hourly Total	289	455	42	8	794	0	150	462	287	0	899	0	254	794	339	3	1390	0	65	867	121	2	1055	3	4138
4:00PM	125	155	24	1	305	0	53	190	108	0	351	1	89	214	86	1	390	2	11	258	32	0	301	0	1347
4:15PM	91	160	23	2	276	0	38	200	105	0	343	0	99	248	110	1	458	0	15	218	42	0	275	1	1352
4:30PM	142	139	20	0	301	0	48	211	124	0	383	0	83	243	82	1	409	1	30	248	46	0	324	0	1417
4:30PM 4:45PM	97	139	20	1	301	0	40	211 217	124	0	367	0	82	243	123	1	409	0	21	240	40	0	313	0	1417
	455		88	4		0	184		442	0	1444	1	353	935	401	4		3	77	971	165	0		1	5533
Hourly Total		636						818		-							1693						1213	1	
5:00PM	99	141	25	3	268 322	2	57	233	90	0	380	0	101	267	116	0	484	3	19	225	58	0	302	0	1434
5:15PM	106	195	21	0		0	45	208	81	0	334	0	107	311	116	0	534	1	11	228	49	0	288	-	1478
5:30PM	108	158	27	1	294	0	52	181	90	0	323	0	93	269	88	0	450	0	15	237	38	0	290	0	1357
5:45PM	76	136	25	4	241	1	35	169	78	0	282	0	98	289	90	2	479	0	11	205	53	0	269	0	1271
Hourly Total	389	630	98	8	1125	3	189	791	339	0	1319	0	399	1136	410	2	1947	4	56	895	198	0	1149	0	5540
2022-06-18	70	154	25	0	240	1	27	170	0.4	0	200	0	71	105	100	c	2.45	0	21	226	40	0	200	1	1170
11:30AM	70	154	25	0	249	1	27	179	84	0	290	0	71	165	103	6	345	0	21	226	42	0	289	1	1173
11:45AM	68	150	35	2	255	1	33	140	91	0	264	0	64	209	89	4	366	0	16	233	58	0	307	1	1192
Hourly Total	138	304	60	2	504	2	60	319	175	0	554	0	135	374	192	10	711	0	37	459	100	0	596	2	2365
12:00PM	68	119	18	1	206	0	30	183	88	2	303	0	65	211	77	1	354	0	31	252	40	2	325	3	1188
12:15PM	67	141	20	1	229	0	41	155	82	0	278	0	62	206	96	3	367	0	11	168	55	1	235	0	1109
12:30PM	78	154	24	5	261	0	44	185	85	0	314	0	75	217	68	3	363	0	18	214	49	0	281	1	1219
12:45PM	79	167	21	0	267	0	33	143	71	0	247	0	81	214	70	0	365	2	16	214	29	0	259	1	1138
Hourly Total	292	581	83	7	963	0	148	666	326	2	1142	0	283	848	311	7	1449	2	76	848	173	3	1100	5	4654
1:00PM	79	141	25	2	247	0	31	147	81	0	259	0	67	229	86	1	383	2	12	210	48	0	270	0	1159
1:15PM	76	143	24	5	248	0	39	142	82	0	263	0	70	234	87	1	392	1	22	225	41	0	288	1	1191
1:30PM	76	138	23	4	241	0	34	163	98	0	295	1	77	205	76	4	362	1	13	186	38	1	238	0	1136
1:45PM	85	139	18	3	245	0	49	206	85	0	340	0	54	199	80	2	335	0	13	276	26	2	317	0	1237
Hourly Total	316	561	90	14	981	0	153	658	346	0	1157	1	268	867	329	8	1472	4	60	897	153	3	1113	1	4723
Total	2206	3694	490	49	6439	7	995	4145	2234	2	7376	2	1943	5732	2305	36	10016	14	445	5851	1042	9	7347	15	31178
% Approach	34.3%			0.8%	-	-	13.5% 5			0%	-				23.0%		-	-			14.2%		-	-	-
% Total		11.8%	1.6%		20.7%		3.2% 1		7.2%		23.7%			18.4%	7.4%				1.4%		3.3%		23.6%		
Lights	2140	3547	484	49	6220		965	4005	2158	2	7130		1859	5624	2253	36	9772		439	5720	1011		7179		30301
% Lights							97.0% 9						95.7%						98.7% 9						97.2%
Single-Unit	57.070	50.070	JU.U 70	10070	50.070	-	57.070 5	JU.U 70 1	50.070	10070	50.770	-	55.7 70	50.170	.,,70 .	100703	70	-	50.7 70 5	J. U70	57.070 .	100703		-	57.270
Trucks	49	93	6	0	148	_	21	70	29	0	120	-	30	58	39	0	127	_	5	95	20	0	120	_	515
% Single-Unit	-13	55	0	0	140			70	20	0	120		50	50	00	0	127		5	55	20	0	120		010
Trucks	2.2%	2.5%	1.2%	0%	2.3%	-	2.1%	1.7%	1.3%	0%	1.6%	-	1.5%	1.0%	1.7%	0%	1.3%	-	1.1%	1.6%	1.9%	0%	1.6%	-	1.7%
Articulated																									
Trucks	16	25	0	0	41	-	3	37	43	0	83	-	50	40	12	0	102	-	1	27	7	0	35	-	261
% Articulated																									
Trucks	0.7%	0.7%	0%	0%	0.6%	-	0.3%	0.9%	1.9%	0%	1.1%	-	2.6%	0.7%	0.5%	0%	1.0%	-	0.2%	0.5%	0.7%	0%	0.5%	-	0.8%
Buses	1	29	0	0	30	-	6	33	4	0	43	-	4	9	1	0	14	-	0	5	4	0	9	-	96
% Buses	0%	0.8%	0%	0%	0.5%	-	0.6%	0.8%	0.2%	0%	0.6%	-	0.2%	0.2%	0%	0%	0.1%	-	0%	0.1%	0.4%	0%	0.1%	-	0.3%
Bicycles on																									
Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	0	4	0	0	4	-	5
% Bicycles																									
on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	2	-	-	-	-	-	14	-	-	-	-	-	15	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-	-	-	-	-	100%	-
*- 1 .	11							·	1																

Thu Jun 16, 2022 Full Length (7 AM-9 AM, 4 PM-6 PM, 11:30 AM-2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099





Thu Jun 16, 2022 AM Peak (Jun 16 2022 7:30AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099

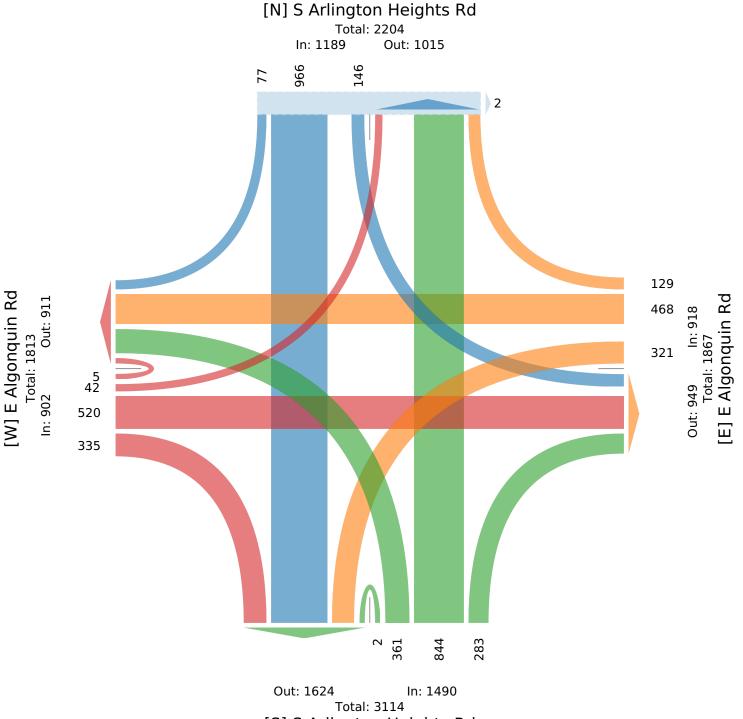


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Leg	E Algo	nquin F	Rd				E Algo	nquin F	Rd				S Arlin	gton H	eights F	٨d				0	eights R	ld			
Direction	Eastbo	und					Westbo	und					Northb	ound					Southb	ound					
Time	R	Т	L	U	Арр	Ped*	R	Т	L	U	App I	Ped*	R	Т	L	U	App	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-16																									
7:30AM	98	142	10	1	251	0	26	125	82	0	233	0	62	213	87	0	362	0	16	218	41	0	275	1	1121
7:45AM	86	154	6	0	246	0	30	117	92	0	239	0	83	252	102	1	438	0	22	281	41	0	344	0	1267
8:00AM	76	106	16	0	198	0	31	101	66	0	198	0	74	179	79	1	333	0	24	245	32	0	301	1	1030
8:15AM	75	118	10	4	207	0	42	125	81	0	248	0	64	200	93	0	357	0	15	222	32	0	269	0	1081
Total	335	520	42	5	902	0	129	468	321	0	918	0	283	844	361	2	1490	0	77	966	146	0	1189	2	4499
% Approach	37.1%	57.6%	4.7%	0.6%	-	-	14.1%	51.0%	35.0% ()%	-	-	19.0%	56.6%	24.2%	0.1%	-	-	6.5%	81.2%	12.3%	0%	-	-	-
% Total	7.4%	11.6%	0.9%	0.1%	20.0%	-	2.9%	10.4%	7.1%	0% 2	20.4%	-	6.3%	18.8%	8.0%	0%	33.1%	-	1.7%	21.5%	3.2%	0%2	26.4%	-	-
PHF	0.855	0.844	0.656	0.313	0.898	-	0.768	0.936	0.872	-	0.925	-	0.852	0.837	0.885	0.500	0.850	-	0.802	0.859	0.890	-	0.864	-	0.888
Lights	311	488	40	5	844	-	118	420	299	0	837	-	264	808	346	2	1420	-	76	937	133	0	1146	-	4247
% Lights	92.8%	93.8%	95.2%	100%	93.6%	-	91.5%	89.7%	93.1% (0% 9	91.2%	-	93.3%	95.7%	95.8%	100%	95.3%	-	98.7%	97.0%	91.1%	0% 9	96.4%	-	94.4%
Single-Unit																									
Trucks	22	24	2	0	48	-	8	24	9	0	41	-	6	21	10	0	37	-	1	22	8	0	31	-	157
% Single-Unit																									
Trucks	6.6%	4.6%	4.8%	0%	5.3%	-	6.2%	5.1%	2.8%)%	4.5%	-	2.1%	2.5%	2.8%	0%	2.5%	-	1.3%	2.3%	5.5%	0%	2.6%	-	3.5%
Articulated	2		0	0			1	10	10	0	22		12	10	-	0	30		0	C		0	10		
Trucks	2	4	0	0	6	-	1	10	12	0	23	-	12	13	5	0	30	-	0	6	4	0	10	-	69
% Articulated Trucks	0.6%	0.8%	0%	0%	0.7%	-	0.8%	2.1%	3.7% (0%	2.5%	-	4.2%	1.5%	1.4%	0%	2.0%	-	0%	0.6%	2.7%	0%	0.8%	-	1.5%
Buses	0	4	0	0	4	-	2	14	1	0	17	-	1	2	0	0	3	-	0	1	1	0	2	-	26
% Buses	0%	0.8%	0%	0%	0.4%	-	1.6%	3.0%	0.3% ()%	1.9%	-	0.4%	0.2%	0%	0%	0.2%	-	0%	0.1%	0.7%	0%	0.2%	-	0.6%
Bicycles on																									
Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles																									
on Road	0%	0%	0%	0%	0%	-	0%	0%	0% ()%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	.00%	-

Thu Jun 16, 2022 AM Peak (Jun 16 2022 7:30AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099





[S] S Arlington Heights Rd

Thu Jun 16, 2022 PM Peak (Jun 16 2022 4:30PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099

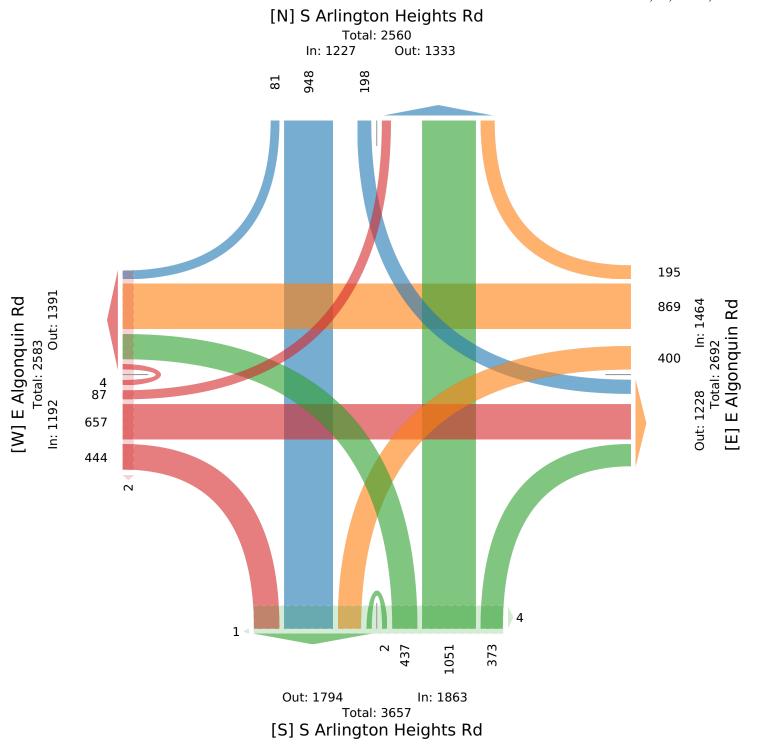


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	E Algo	nguin I	Rd				E Algo	nguin R	d				S Arlin	gton H	eights F	۲d			S Arlin	gton H	eights F	d			
U	Eastboi	ind					Westbo	und					Northb	0	0				Southb	ound	0				
Time	R	Т	L	U	Арр	Ped*	R	Т	L	U	App	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	App Pe	ed*	Int
2022-06-16																									
4:30PM	142	139	20	0	301	0	48	211	124	0	383	0	83	243	82	1	409	1	30	248	46	0	324	0	1417
4:45PM	97	182	21	1	301	0	45	217	105	0	367	0	82	230	123	1	436	0	21	247	45	0	313	0	1417
5:00PM	99	141	25	3	268	2	57	233	90	0	380	0	101	267	116	0	484	3	19	225	58	0	302	0	1434
5:15PM	106	195	21	0	322	0	45	208	81	0	334	0	107	311	116	0	534	1	11	228	49	0	288	0	1478
Total	444	657	87	4	1192	2	195	869	400	0	1464	0	373	1051	437	2	1863	5	81	948	198	0	1227	0	5746
% Approach	37.2%	55.1%	7.3%	0.3%	-	-	13.3%	59.4%	27.3% ()%	-	-	20.0%	56.4%	23.5%	0.1%	-	-	6.6%	77.3%	16.1%	0%	-	-	-
% Total	7.7%	11.4%	1.5%	0.1%	20.7%	-	3.4%	15.1%	7.0%	0% 2	25.5%	-	6.5%	18.3%	7.6%	0%	32.4%	-	1.4%	16.5%	3.4%	0%2	21.4%	-	-
PHF	0.782	0.842	0.870	0.333	0.925	-	0.855	0.932	0.806	-	0.956	-	0.871	0.845	0.888	0.500	0.872	-	0.675	0.956	0.853	-	0.947	-	0.972
Lights	436	631	87	4	1158	-	190	853	394	0	1437	-	361	1046	433	2	1842	-	79	939	192	0	1210	-	5647
% Lights	98.2%	96.0%	100%	100%	97.1%	-	97.4%	98.2%	98.5% ()% 9	98.2%	-	96.8%	99.5%	99.1%	100%	98.9%	-	97.5%	99.1%	97.0%	0% 9	98.6%	-	98.3%
Single-Unit																									
Trucks	7	12	0	0	19	-	3	5	1	0	9	-	4	1	2	0	7	-	2	6	3	0	11	-	46
% Single-Unit																									
Trucks	1.6%	1.8%	0%	0%	1.6%	-	1.5%	0.6%	0.3% ()%	0.6%	-	1.1%	0.1%	0.5%	0%	0.4%	-	2.5%	0.6%	1.5%	0%	0.9%	-	0.8%
Articulated									_						_					_					
Trucks	1	8	0	0	9	-	1	9	5	0	15	-	8	3	2	0	13	-	0	3	3	0	6	-	43
% Articulated Trucks	0.2%	1.2%	0%	0%	0.8%	-	0.5%	1.0%	1.3% (0%	1.0%	_	2.1%	0.3%	0.5%	0%	0.7%	-	0%	0.3%	1.5%	0%	0.5%	_	0.7%
Buses	0	6	0	0	6	-	1	2		0	3	-	0	1	0	0	1	-	0	0.570			0.070	-	10
% Buses	-	0.9%	0%		0.5%	-	0.5%	0.2%		-	0.2%	-	-	0.1%	0%		0.1%	-	0%	0%			0%	-	0.2%
Bicycles on																									
Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles																									
on Road	0%	0%	0%	0%	0%	-	0%	0%	0% ()%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

Thu Jun 16, 2022 PM Peak (Jun 16 2022 4:30PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099





Sat Jun 18, 2022 Midday Peak (WKND), PM Peak (WKND) (Jun 18 2022 1PM - 2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099

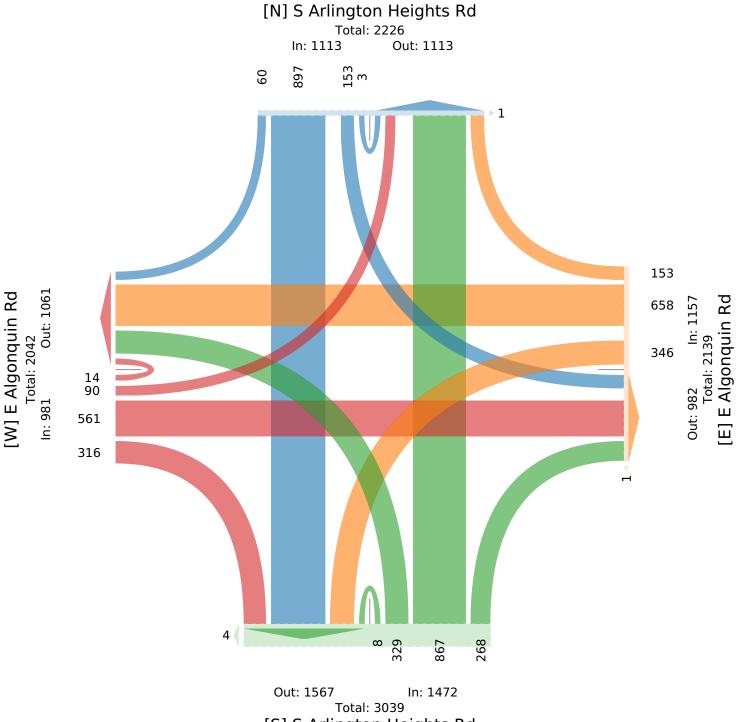


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg E Algonquin Rd S Arlington Heights Rd S Arlington Heights Rd E Algonquin Rd Northbound Direction Eastbound Westbound Southbound Time R R App Ped* U U App Ped* Int Т L U App Ped* Т L U R Т L App Ped* R Т L 2022-06-18 1:00PM 1:15PM 1:30PM 1:45PM Total 8 1472 32.2% 57.2% 9.2% 1.4% 5.4% 80.6% 13.7% 0.3% % Approach . 13.2% 56.9% 29.9% 0% 18.2% 58.9% 22.4% 0.5% _ % Total 6.7% 11.9% 1.9% 0.3% **20.8%** 3.2% 13.9% 7.3% 0% 24.5% 5.7% 18.4% 7.0% 0.2% 31.2% 1.3% 19.0% 3.2% 0.1% **23.6%** PHF 0.929 0.981 0.900 0.700 **0.989** 0.781 0.799 0.883 0.870 0.925 0.945 0.500 **0.938** 0.682 0.813 0.797 0.375 **0.878** 0.954 - 0.851 Lights % Lights 99.7% 98.8% 100% 100% **99.2%** 98.7% 98.8% 99.1% 0% **98.9%** 97.8% 99.2% 97.6% 100% **98.6%** 96.7% 98.0% 99.3% 100% **98.1%** 98.7% Single-Unit Trucks 2 0 % Single-Unit Trucks 0.3% 0.4% 0% 0% **0.3%** 0.7% 0.8% 0.6% 0% 0.7% 1.5% 0.5% 2.4% 0% 1.1% 1.7% 1.3% 0.7% 0% 1.3% 0.9% Articulated Trucks 1 0 % Articulated 0% 0.2% 0% 0% 0.1% 0.7% 0.2% 0.3% 0% 0.3% 0.4% 0.1% 0% 0% 0.1% 1.7% 0.2% 0% 0% 0.3% 0.2% Trucks Buses 0% 0.3% 0.2% 0% 0.7% 0% 0% **0.4%** 0% 0% 0.2% 0.4% 0.1% 0% 0% **0.1%** 0% 0.1% 0% 0% 0.1% % Buses Bicycles on 0 0 Road % Bicycles 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0.1% 0% 0% 0.1% 0% 0.3% 0% 0% 0.3% 0.1% on Road Pedestrians % Pedestrians - 100% - 100% - 100%

S Arlington Heights Rd with E Algonquin Rd - TMC Sat Jun 18, 2022 Midday Peak (WKND), PM Peak (WKND) (Jun 18 2022 1PM - 2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966117, Location: 42.044284, -87.983099





[S] S Arlington Heights Rd

Thu May 11, 2023 Full Length (7 AM-9 AM, 4 PM-6 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1066698, Location: 42.044284, -87.983099



Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Arlington Heights Road

Т

L U

App Ped* Int

Southbound

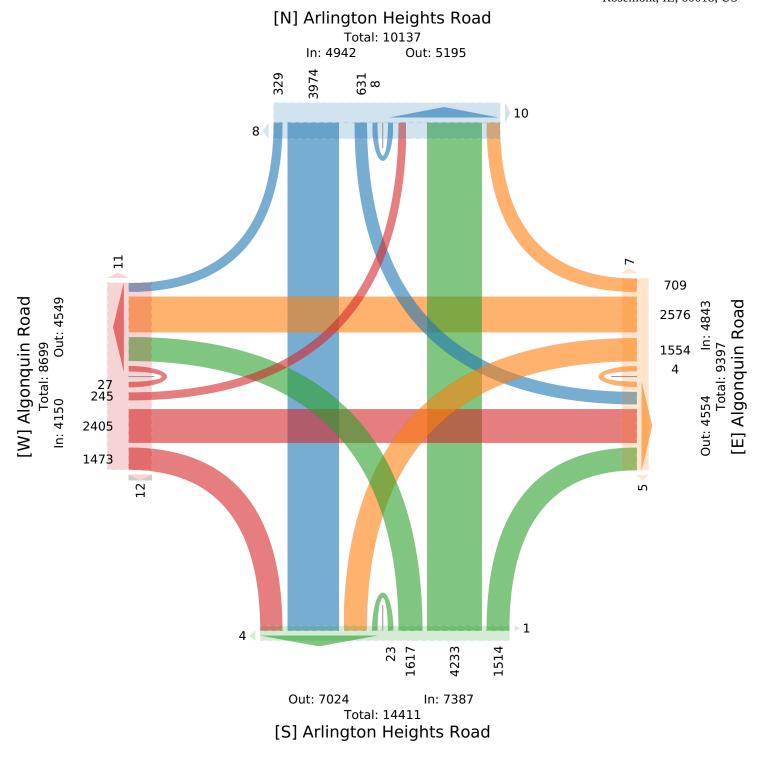
R

Leg Algonquin Road Algonquin Road Arlington Heights Road Direction Eastbound Westbound Northbound Time R Т U App Ped* R Т L U App Ped* R Т L U App Ped* L 2023-05-11 7:00AM 7:15AM 7:30AM 7:45AM Hourly Total 8:00AM 8:15AM 8:30AM

8:45AM	79	88	17	3	187	0	37	137	67	0	241	0	87	208	86	1	382	0	26	152	40	1	219	0	1029
Hourly Total	322	484	55	4	865	0	148	540	330	0	1018	1	347	920	364	9	1640	0	90	835	146	1	1072	2	4595
4:00PM	120	172	18	2	312	4	58	211	135	0	404	2	94	294	103	0	491	0	19	282	35	1	337	5	1544
4:15PM	109	162	14	4	289	3	65	202	93	1	361	2	109	305	108	0	522	0	21	285	42	1	349	2	1521
4:30PM	142	181	20	2	345	5	55	201	122	0	378	1	105	273	100	0	478	1	27	300	61	3	391	2	1592
4:45PM	99	163	20	0	282	7	48	174	115	0	337	4	109	327	146	0	582	0	27	320	40	0	387	5	1588
Hourly Total	470	678	72	8	1228	19	226	788	465	1	1480	9	417	1199	457	0	2073	1	94	1187	178	5	1464	14	6245
5:00PM	121	192	33	2	348	0	66	232	113	0	411	0	123	305	112	4	544	1	23	314	45	0	382	0	1685
5:15PM	87	200	14	4	305	0	46	201	88	0	335	1	116	346	129	0	591	1	18	267	44	0	329	0	1560
5:30PM	83	166	13	3	265	1	47	181	101	1	330	0	110	304	102	6	522	0	16	253	42	2	313	1	1430
5:45PM	80	160	20	2	262	0	47	173	105	2	327	1	95	255	110	4	464	1	13	241	42	0	296	0	1349
Hourly Total	371	718	80	11	1180	1	206	787	407	3	1403	2	444	1210	453	14	2121	3	70	1075	173	2	1320	1	6024
Total	1473	2405	245	27	4150	23	709	2576	1554	4	4843	12	1514	4233	1617	23	7387	5	329	3974	631	8	4942	18	21322
% Approach	35.5%	58.0%	5.9%	0.7%	-	-	14.6%	53.2%	32.1%	0.1%	-	-	20.5%	57.3%	21.9%	0.3%	-	-	6.7%	80.4%	12.8%	0.2%	-	-	-
% Total	6.9%	11.3%	1.1%	0.1%	19.5%	-	3.3%	12.1%	7.3%	0%	22.7%	-	7.1%	19.9%	7.6%	0.1%	34.6%	-	1.5%	18.6%	3.0%	0%	23.2%	-	_
Lights	1443	2276	240	27	3986	-	672	2452	1488	4	4616	-	1441	4137	1567	23	7168	-	324	3899	588	8	4819	-	20589
% Lights	98.0%	94.6%	98.0%	100%	96.0%	-	94.8%	95.2%	95.8%	100% !	95.3%	-	95.2%	97.7%	96.9%	100%	97.0%	-	98.5%	98.1%	93.2%	100%	97.5%	-	96.6%
Single-Unit																									
Trucks	21	66	2	0	89	-	15	54	21	0	90	-	26	54	34	0	114	-	4	45	20	0	69	-	362
% Single-Unit	1 10/	0.70/	0.00/	00/	0.40/		D 40/	0.40/	4 40/	00/	4.00/		1 70/	4.00/	0.40/	00/	4 50/		4.00/	4 40/	0.00/	00/			1 50/
Trucks	1.4%	2.7%	0.8%	0%	2.1%	-	2.1%	2.1%	1.4%	0%	1.9%	-	1.7%	1.3%	2.1%	0%	1.5%	-	1.2%	1.1%	3.2%	0%	1.4%	-	1.7%
Articulated Trucks	8	32	2	0	42	_	4	40	39	0	83	-	36	30	10	0	76	_	1	18	2	0	21	_	222
% Articulated		52	-						00		00				10	0			-	10	-	0			
Trucks	0.5%	1.3%	0.8%	0%	1.0%	-	0.6%	1.6%	2.5%	0%	1.7%	-	2.4%	0.7%	0.6%	0%	1.0%	-	0.3%	0.5%	0.3%	0%	0.4%	-	1.0%
Buses	1	31	1	0	33	-	18	29	6	0	53	-	11	12	6	0	29	-	0	12	21	0	33	-	148
% Buses	0.1%	1.3%	0.4%	0%	0.8%	-	2.5%	1.1%	0.4%	0%	1.1%	-	0.7%	0.3%	0.4%	0%	0.4%	-	0%	0.3%	3.3%	0%	0.7%	-	0.7%
Bicycles on																									
Road	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	23	-	-	-	-	-	12	-	-	-	-	-	5	-	-	-	-	-	18	
% Pedestrians	_	_	-	-	- 1	100%	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-	-	-	-	- 1	00%	_

Thu May 11, 2023 Full Length (7 AM-9 AM, 4 PM-6 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1066698, Location: 42.044284, -87.983099





Thu May 11, 2023 AM Peak (7:30 AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1066698, Location: 42.044284, -87.983099

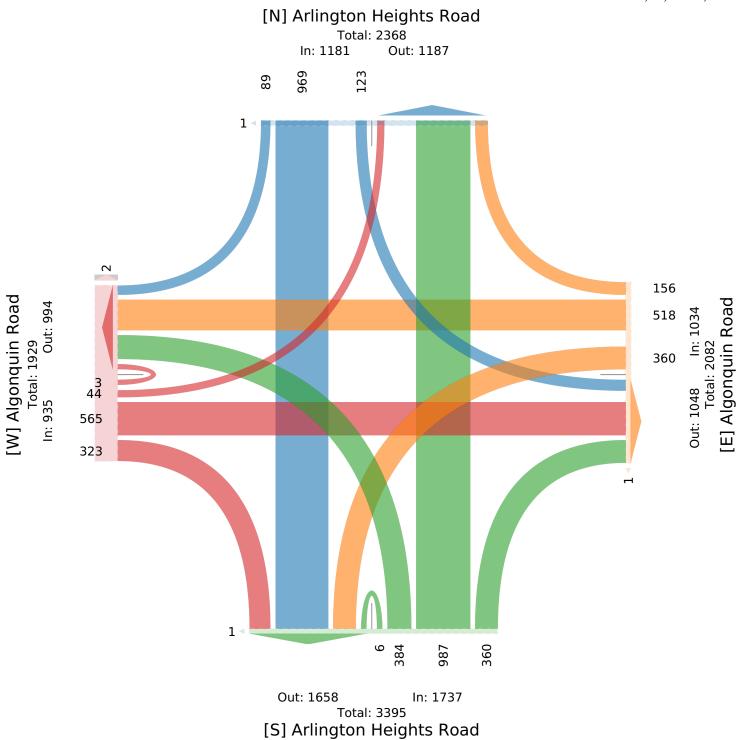


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	Algonq	uin Ro	ad				Algonq	uin Ro	ad				Arlingt	on Heig	ghts Ro	ad			Arlingt	on Hei	ghts Ro	ad			
Direction	Eastbou	und					Westbo	und					Northb	ound					Southb	ound					
Time	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2023-05-11																									
7:30AM	67	142	9	2	220	1	35	117	84	0	236	0	85	277	110	0	472	1	21	253	39	0	313	1	1241
7:45AM	84	154	11	0	249	1	42	139	87	0	268	0	88	244	94	0	426	0	27	223	32	0	282	0	1225
8:00AM	80	131	12	1	224	0	32	137	97	0	266	1	90	236	106	3	435	0	23	240	25	0	288	0	1213
8:15AM	92	138	12	0	242	0	47	125	92	0	264	0	97	230	74	3	404	0	18	253	27	0	298	0	1208
Total	323	565	44	3	935	2	156	518	360	0	1034	1	360	987	384	6	1737	1	89	969	123	0	1181	1	4887
% Approach	34.5%	60.4%	4.7%	0.3%	-	-	15.1%	50.1%	34.8%	0%	-	-	20.7%	56.8%	22.1%	0.3%	-	-	7.5%	82.0%	10.4%	0%	-	-	-
% Total	6.6%	11.6%	0.9%	0.1%	19.1%	-	3.2%	10.6%	7.4%	0%2	21.2%	-	7.4%	20.2%	7.9%	0.1%	35.5%	-	1.8%	19.8%	2.5%	0% 2	24.2%	-	-
PHF	0.878	0.917	0.917	0.375	0.939	-	0.830	0.932	0.928	-	0.965	-	0.928	0.891	0.873	0.500	0.920	-	0.824	0.958	0.788	-	0.943	-	0.984
Lights	309	539	42	3	893	-	137	479	340	0	956	-	333	955	366	6	1660	-	88	945	111	0	1144	-	4653
% Lights	95.7%	95.4%	95.5%	100%	95.5%	-	87.8%	92.5%	94.4%	0% 9	92.5%	-	92.5%	96.8%	95.3%	100%	95.6%	-	98.9%	97.5%	90.2%	0% 9	96.9%	-	95.2%
Single-Unit																									
Trucks	10	17	1	0	28	-	5	15	5	0	25	-	11	18	12	0	41	-	1	13	4	0	18	-	112
% Single-Unit																									
Trucks	3.1%	3.0%	2.3%	0%	3.0%	-	3.2%	2.9%	1.4%	0%	2.4%	-	3.1%	1.8%	3.1%	0%	2.4%	-	1.1%	1.3%	3.3%	0%	1.5%	-	2.3%
Articulated Trucks	4	3	1	0	8		1	15	12	0	28		11	8	3	0	22		0	8	0	0	8		66
% Articulated	4	3	1	0	0	-	1	15	12	0	20	-	11	0	3	0	22	-	0	0	0	0	0	-	00
% Articulated Trucks	1.2%	0.5%	2.3%	0%	0.9%	-	0.6%	2.9%	3.3% (0%	2.7%	-	3.1%	0.8%	0.8%	0%	1.3%	-	0%	0.8%	0%	0%	0.7%	-	1.4%
Buses	0	6	0	0	6	-	13	9	3	0	25	-	5	6	3	0	14	-	0	3	8	0	11	-	56
% Buses	0%	1.1%	0%	0%	0.6%	-	8.3%	1.7%	0.8%	0%	-	-	1.4%	-	0.8%	0%	0.8%	-	0%	-	6.5%	0%		-	1.1%
Bicycles on																									
Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles																									
on Road	0%	0%	0%	0%	0%	-	0%	0%	0% (0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	.00%	-

Thu May 11, 2023 AM Peak (7:30 AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1066698, Location: 42.044284, -87.983099





Thu May 11, 2023 PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements



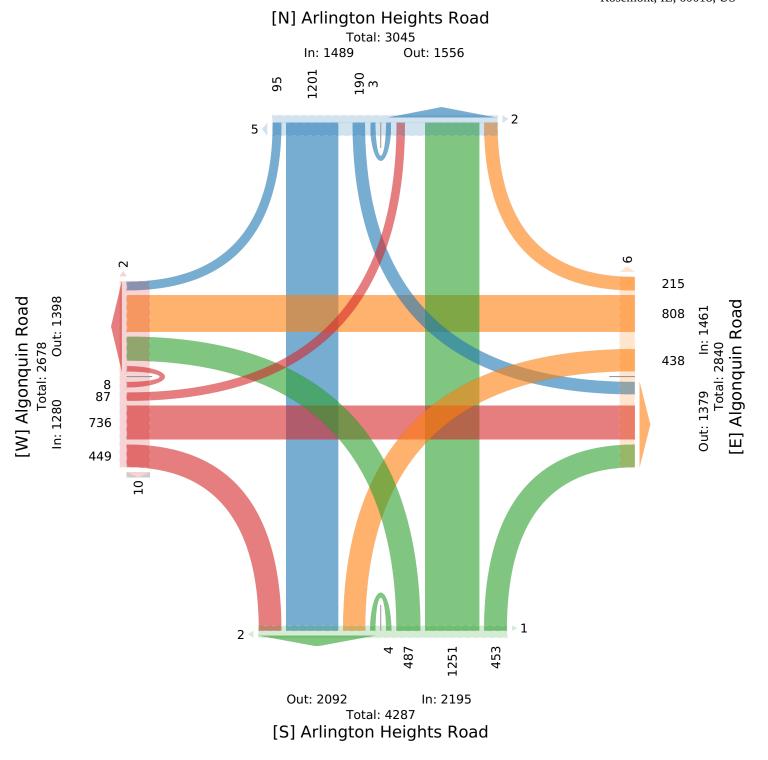
Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

ID: 1066698, Location: 42.044284, -87.983099

Leg Direction	Algono		oad				Algonq Westbo		ad				Arlingt Northb		ghts Ro	ad			Arlingt Southb	,	ghts Ro	ad			
Time	R	T	L	II	Арр		R	T	I	U	Ann	Ped*	R	T	L	II	Арр	Pod*	R	T	L	U	Арр	Pod*	Int
2023-05-11	K	1	Г	0	T PP	i cu	K	1	Ц	0	TPP	I Cu	K	1	L	0	T PP	i cu	K	1	Ц	0	1446	rcu	m
4:30PM	142	181	20	2	345	5	55	201	122	0	378	1	105	273	100	0	478	1	27	300	61	3	391	2	1592
4:45PM	99	163	20	0	282	7	48	174	115	0	337	4	109	327	146	0	582	0	27	320	40	0	387	5	1588
5:00PM	121	192	33	2	348	0	66	232	113	0	411	0	123	305	112	4	544	1	23	314	45	0	382	0	1685
5:15PM	87	200	14	4	305	0	46	201	88	0	335	1	116	346	129	0	591	1	18	267	44	0	329	0	1560
Total	449	736	87	8	1280	12	215	808	438	0	1461	6	453	1251	487	4	2195	3	95	1201	190	3	1489	7	6425
% Approach	35.1%		-	-	-	-	14.7%			0%	-	-	20.6%	-	-		-	-	6.4%	-	12.8%	0.2%	-	-	
% Total	7.0%	11.5%	1.4%	0.1%	19.9%	-	3.3%	12.6%	6.8%	0%2	22.7%	-	7.1%	19.5%	7.6%	0.1%	34.2%	-	1.5%	18.7%	3.0%	0%	23.2%	-	-
PHF	0.790	0.920	0.659	0.500	0.920	-	0.814	0.870	0.898	-	0.888	-	0.921	0.904	0.834	0.250	0.929	-	0.880	0.938	0.779	0.250	0.952	-	0.953
Lights	447	695	87	8	1237	-	213	789	431	0	1433	-	439	1238	481	4	2162	-	94	1188	182	3	1467	-	6299
% Lights	99.6%	94.4%	100%	100%	96.6%	-	99.1%	97.6%	98.4%	0% 9	98.1%	-	96.9%	99.0%	98.8%	100%	98.5%	-	98.9%	98.9%	95.8%	100%	98.5%	-	98.0%
Single-Unit																									
Trucks	1	18	0	0	19	-	2	7	4	0	13	-	3	6	6	0	15	-	1	12	4	0	17	-	64
% Single-Unit Trucks	0.2%	2.4%	0%	0%	1.5%	-	0.9%	0.9%	0.9%	0%	0.9%	-	0.7%	0.5%	1.2%	0%	0.7%	-	1.1%	1.0%	2.1%	0%	1.1%	-	1.0%
Articulated Trucks	1	16	0	0	17	_	0	9	3	0	12	-	10	7	0	0	17	_	0	1	0	0	1	_	47
% Articulated	-		-	-			-								-	-			-		-	-			
Trucks	0.2%	2.2%	0%	0%	1.3%	-	0%	1.1%	0.7%	0%	0.8%	-	2.2%	0.6%	0%	0%	0.8%	-	0%	0.1%	0%	0%	0.1%	-	0.7%
Buses	0	7	0	0	7	-	0	2	0	0	2	-	1	0	0	0	1	-	0	0	4	0	4	-	14
% Buses	0%	1.0%	0%	0%	0.5%	-	0%	0.2%	0%	0%	0.1%	-	0.2%	0%	0%	0%	0%	-	0%	0%	2.1%	0%	0.3%	-	0.2%
Bicycles on Road	0	0	0	0	0	_	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	1
% Bicycles																									
on Road	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	12	-	-	-	-	-	6	-	-	-	-	-	3	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	100%	-

Thu May 11, 2023 PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1066698, Location: 42.044284, -87.983099





Arlington Heights Road with Tonne Drive - TMC

Thu May 11, 2023

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

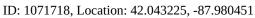
ID: 1071718, Location: 42.043225, -87.980451



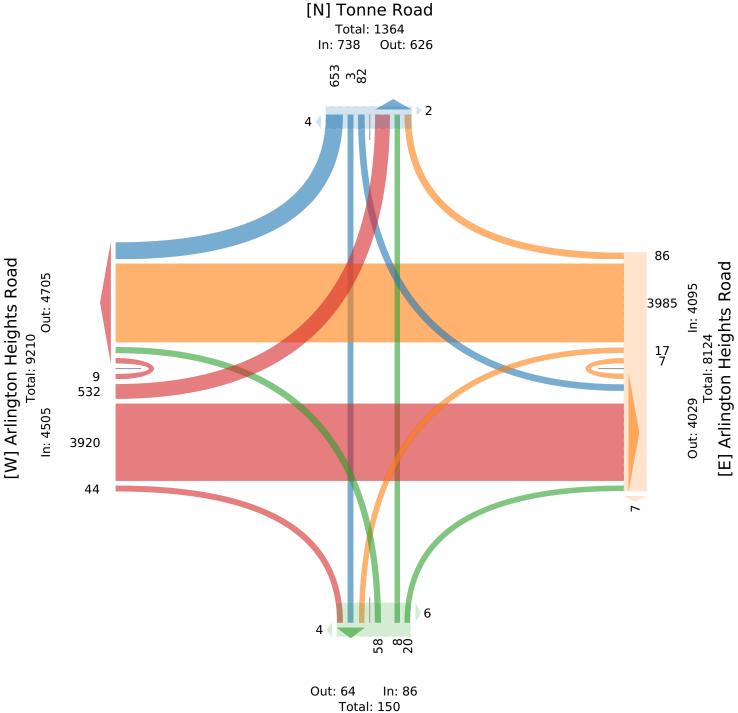
Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Arlingt Eastbou		ghts Ro	ad			Arlingt Westbo		ghts Ro	ad			Tonne l Northb						Tonne F Southbo						
Time	R	T	L	II	App I	od*	R	T	L	U	Арр	Dod*	R	T	T	U	Арр	Dod*	R	T	T	U	App	Dod*	Int
2023-05-11	K	1	г	0	түү т	eu	K	1	Г	0	лүү	I eu	K	1	г	0	лүү	i eu	K	1	Ь	0	лүү	i eu	m
7:00AM	3	183	18	0	204	0		158	1	0	160	1	1	0	3	0	4	3	40	0	3	0	43	0	411
7:15AM	1	224	16	2	243	0	3	188	1	0	192	0	1	0	2	0	3	3	43	0	2	0	45	0	483
7:30AM	8	229	34	0	271	0	5	209	0	0	214	1	0	0	0	0	0	3	48	0	6	0	54	0	539
7:45AM	5	280	22	1	308	0	5	219	4	0	228	0	1	1	1	0	3	0	40	1	4	0	45	0	584
Hourly Total	17	916	90	3	1026	0	14	774	6	0	794	2	3	1	6	0	10	9	171	1	15	0	187	0	2017
8:00AM	6	211	24	0	241	0	2	215	0	0	217	0	1	0	1	0	2	0	46	0	3	0	49	0	509
8:15AM	1	231	15	0	247	0	3	225	0	3	231	0	2	0	1	0	3	0	31	0	3	0	34	0	515
8:30AM	5	234	25	0	264	0	2	187	0	3	192	0	0	0	0	0	0	0	31	0	4	0	35	0	491
8:45AM	4	192	22	0	218	0	0	193	0	1	194	1	2	1	2	0	5	0	28	0	1	0	29	0	446
Hourly Total	16	868	86	0	970	0	7	820	0	7	834	1	5	1	4	0	10	0	136	0	11	0	147	0	1961
4:00PM	1	244	34	3	282	0	14	349	0	0	363	0	1	0	11	0	12	0	54	2	5	0	61	3	718
4:15PM	1	274	45	0	320	0	8	310	1	0	319	0	2	0	4	0	6	0	33	0	10	0	43	0	688
4:30PM	3	252	33	0	288	0	6	328	1	0	335	0	2	3	8	0	13	0	44	0	9	0	53	0	689
4:45PM	1	298	9	0	308	0	1	295	1	0	297	0	1	1	8	0	10	0	30	0	7	0	37	0	652
Hourly Total	6	1068	121	3	1198	0	29	1282	3	0	1314	0	6	4	31	0	41	0	161	2	31	0	194	3	2747
5:00PM	1	271	59	1	332	0	8	335	1	0	344	0	1	0	7	0	8	1	54	0	5	0	59	1	743
5:15PM	2	305	62	0	369	0	9	265	3	0	277	4	1	2	6	0	9	0	38	0	9	0	47	1	702
5:30PM	1	254	56	1	312	0	9	272	2	0	283	0	3	0	3	0	6	0	34	0	6	0	40	1	641
5:45PM	1	238	58	1	298	0	10	237	2	0	249	0	1	0	1	0	2	0	59	0	5	0	64	0	613
Hourly Total	5	1068	235	3	1311	0	36	1109	8	0	1153	4	6	2	17	0	25	1	185	0	25	0	210	3	2699
Total	44	3920	532	9	4505	0	86	3985	17	7	4095	7	20	8	58	0	86	10	653	3	82	0	738	6	9424
% Approach	1.0%	87.0%	11.8%	0.2%	-	-	2.1%	97.3%	0.4%	0.2%	-	-	23.3%	9.3%	67.4%	0%	-	-	88.5%	0.4%	11.1% (0%	-	-	-
% Total	0.5%	41.6%	5.6%	0.1%	47.8%	-	0.9%	42.3%	0.2%	0.1%	43.5%	-	0.2%	0.1%	0.6%	0%	0.9%	-	6.9%	0%	0.9% (0%	7.8%	-	-
Lights	42	3674	526	9	4251	-	85	3778	17	5	3885	-	18	7	56	0	81	-	642	3	79	0	724	-	8941
% Lights	95.5%	93.7%	98.9%	100%	94.4%	-	98.8%	94.8%	100%	71.4%	94.9%	-	90.0%	87.5%	96.6%	0% 9	94.2%	-	98.3% 1	100%	96.3% (0% 9	98.1%	-	94.9%
Single-Unit																									
Trucks	0	112	3	0	115	-	0	97	0	0	97	-	1	1	0	0	2	-	6	0	2	0	8	-	222
% Single-Unit																									
Trucks	0%	2.9%	0.6%	0%	2.6%	-	0%	2.4%	0%	0%	2.4%	-	5.0%	12.5%	0%	0%	2.3%	-	0.9%	0%	2.4% (0%	1.1%	-	2.4%
Articulated			0	0	77			74	0	0	74			0	0	0	0		0	0	0	0	0		151
Trucks	0	77	0	0	77	-	0	74	0	0	74	-	0	0	0	0	0	-	0	0	0	0	0	-	151
% Articulated Trucks	0%	2.0%	0%	0%	1.7%	_	0%	1.9%	0%	0%	1.8%	_	0%	0%	0%	0%	0%	_	0%	0%	0% (0%	0%	_	1.6%
Buses	1	57	3	0/0	61	-	1	35	0	2	38	-	1	0	2	0	3	-	5	0/0	1	0	6	-	1.070
% Buses	2.3%				1.4%		1.2%	0.9%		28.6%			5.0%		3.4%				0.8%		1.2% (1.1%
Bicycles on	2.370	1.570	5.670	070	1.470	_	1.270	5.570	0704	20.070	5.570		5.070	070	5.770	0 /0	5.570	_	0.070	070	1.2/0	0 /0	0.070	-	1.170
Road	1	0	0	0	1	-	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	2
% Bicycles																									
on Road	2.3%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	10	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	00%	-
*D-J	1.1		1	0			т С.		-	-		TTOO													

Arlington Heights Road with Tonne Drive - TMC Thu May 11, 2023 Full Length (7 AM-9 AM, 4 PM-6 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements







[S] Tonne Road

Arlington Heights Road with Tonne Drive - TMC

Thu May 11, 2023 AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1071718, Location: 42.043225, -87.980451



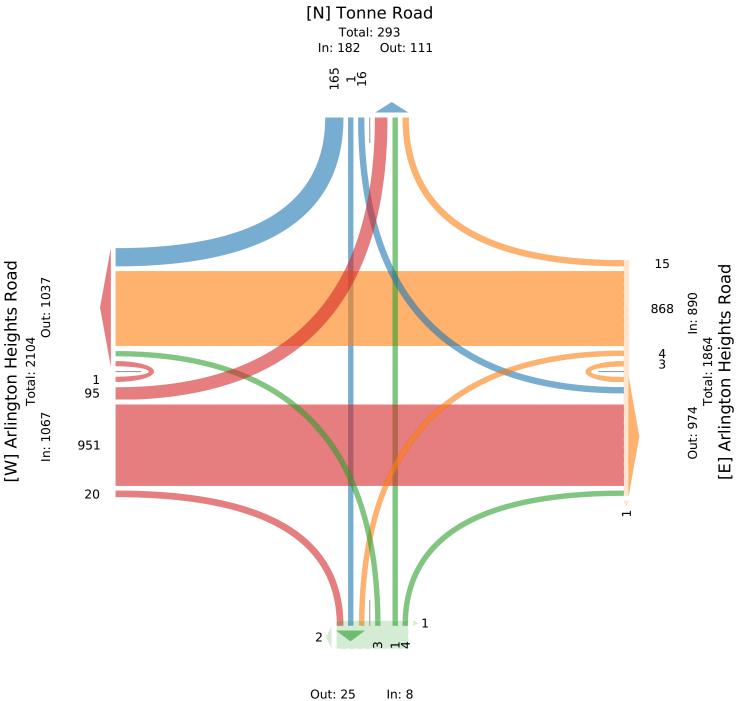
Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	Arlingt	on Heig	ghts Ro	ad			Arlingt	on Heig	ghts Ro	oad			Tonne I	Road					Tonne	Road					
Direction	Eastbou	ind					Westbo	und					Northbo	ound					Southb	ound					
Time	R	Т	L	U	Ар	p Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	App P	ed*	Int
2023-05-11																									
7:30AM	8	229	34	0	27	1 0	5	209	0	0	214	1	0	0	0	0	0	3	48	0	6	0	54	0	539
7:45AM	5	280	22	1	30	8 0	5	219	4	0	228	0	1	1	1	0	3	0	40	1	4	0	45	0	584
8:00AM	6	211	24	0	24	1 0	2	215	0	0	217	0	1	0	1	0	2	0	46	0	3	0	49	0	509
8:15AM	1	231	15	0	24	7 0	3	225	0	3	231	0	2	0	1	0	3	0	31	0	3	0	34	0	515
Total	20	951	95	1	106	7 0	15	868	4	3	890	1	4	1	3	0	8	3	165	1	16	0	182	0	2147
% Approach	1.9%	89.1%	8.9%	0.1%			1.7%	97.5%	0.4%	0.3%	-	-	50.0%	12.5%	37.5%)%	-	-	90.7%	0.5%	8.8%	0%	-	-	-
% Total	0.9%	44.3%	4.4%	0%	49.7%	6 -	0.7%	40.4%	0.2%	0.1%	41.5%	-	0.2%	0%	0.1%)%	0.4%	-	7.7%	0%	0.7%	0%	8.5%	-	-
PHF	0.679	0.849	0.699	0.250	0.86	5-	0.750	0.964	0.250	0.250	0.963	-	0.500	0.250	0.750	-	0.667	-	0.859	0.250	0.667	-	0.843	-	0.919
Lights	19	886	92	1	99	8 -	14	793	4	1	812	-	3	1	3	0	7	-	160	1	15	0	176	-	1993
% Lights	95.0%	93.2%	96.8%	100%	93.5%	6 -	93.3%	91.4%	100%	33.3%	91.2%	-	75.0%	100%	100%)% (37.5%	-	97.0%	100%	93.8%	0% 9	96.7%	-	92.8%
Single-Unit																									
Trucks	0	30	2	0	3	2 -	0	39	0	0	39	-	0	0	0	0	0	-	4	0	1	0	5	-	76
% Single-Unit																									
Trucks	0%	3.2%	2.1%	0%	3.0%	6 -	0%	4.5%	0%	0%	4.4%	-	0%	0%	0%)%	0%	-	2.4%	0%	6.3%	0%	2.7%	-	3.5%
Articulated																									
Trucks	0	17	0	0	1	7 -	0	19	0	0	19	-	0	0	0	0	0	-	0	0	0	0	0	-	36
% Articulated	00/	1.00/	00/	00/	1 00	,	00/	2.20/	00/	00/	2 10/		00/	00/	00/	207	00/		00/	00/	00/	00/	00/		1 70/
Trucks	0%		0%		1.69	-	0%	2.2%	0%		2.1%	-	0%	0%	0%		0%	-	0%	0%			0%	-	1.7%
Buses	0	18	1	0	1	-	1	17	0	2	20	-	1	0	0		1	-	1	0	-		1	-	41
% Buses	0%	1.9%	1.1%	0%	1.8%	6 -	6.7%	2.0%	0%	66.7%	2.2%	-	25.0%	0%	0%)% 1	12.5%	-	0.6%	0%	0%	0%	0.5%	-	1.9%
Bicycles on Road	1	0	0	0		1 -	0	0	0	0	0	_	0	0	0	0	0	_	0	0	0	0	0	_	1
% Bicycles	1	0	0	0		-		0	5	0	0			0	5	0	5			0	0	0	v		1
on Road	5.0%	0%	0%	0%	0.19	6 -	0%	0%	0%	0%	0%	-	0%	0%	0%)%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-		- 0	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	
% Pedestrians	-	-	-	-			-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

Arlington Heights Road with Tonne Drive - TMC Thu May 11, 2023 AM Peak (7:30 AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1071718, Location: 42.043225, -87.980451



Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Total: 33 [S] Tonne Road

Arlington Heights Road with Tonne Drive - TMC

Thu May 11, 2023 PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1071718, Location: 42.043225, -87.980451



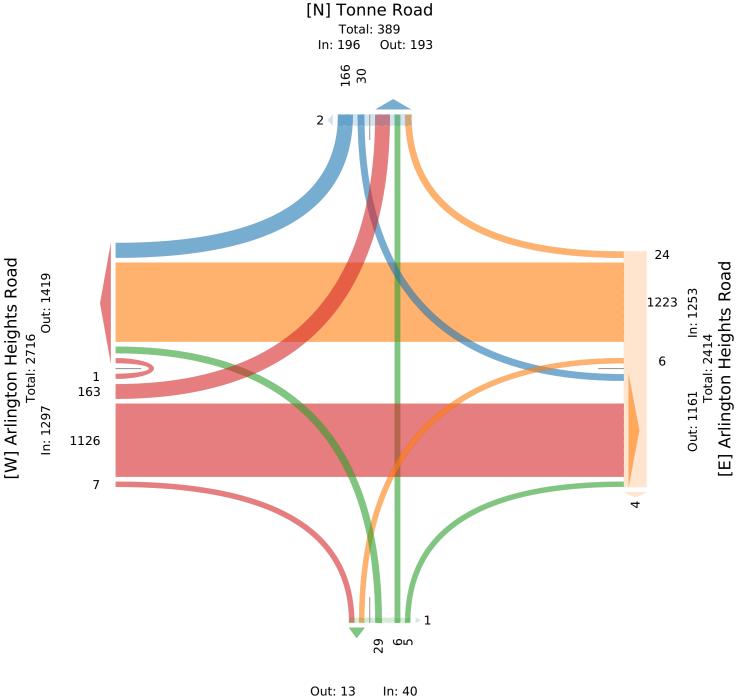
Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	Arling	ton Hei	ights Ro	oad			Arling	ton Hei	ghts R	oad			Tonne	Road					Tonne I	Road	d				
Direction	Eastbo	und	-				Westbo	ound	-				Northb	ound					Southbo	ound	1				
Time	R	Т	L	U	App 1	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2023-05-11 4:30PM	3	252	33	0	288	0	6	328	1	0	335	0	2	3	8	0	13	0	44	0	9	0	53	0	689
4:45PM	1	298	9	0	308	0	1	295	1	0	297	0	1	1	8	0	10	0	30	0	7	0	37	0	652
5:00PM	1	271	59	1	332	0	8	335	1	0	344	0	1	0	7	0	8	1	54	0	5	0	59	1	743
5:15PM	2	305	62	0	369	0	9	265	3	0	277	4	1	2	6	0	9	0	38	0	9	0	47	1	702
Total	7	1126	163	1	1297	0	24	1223	6	0	1253	4	5	6	29	0	40	1	166	0	30	0	196	2	2786
% Approach	0.5%	86.8%	12.6%	0.1%	-	-	1.9%	97.6%	0.5%	0%	-	-	12.5%	15.0%	72.5%	0%	-	-	84.7%	0%	15.3% (0%	-	-	-
% Total	0.3%	40.4%	5.9%	0%	46.6%	-	0.9%	43.9%	0.2%	0%	45.0%	-	0.2%	0.2%	1.0%	0%	1.4%	-	6.0%	0%	1.1%	0%	7.0%	-	-
PHF	0.583	0.923	0.657	0.250	0.879	-	0.667	0.913	0.500	-	0.911	-	0.625	0.500	0.906	-	0.769	-	0.769	-	0.833	-	0.831	-	0.937
Lights	7	1066	163	1	1237	-	24	1198	6	0	1228	-	4	6	29	0	39	-	165	0	29	0	194	-	2698
% Lights	100%	94.7%	100%	100%	95.4%	-	100%	98.0%	100%	0%	98.0%	-	80.0%	100%	100%	0%	97.5%	-	99.4%	0% 9	96.7%)% 9	9.0%	-	96.8%
Single-Unit																									
Trucks	0	23	0	0	23	-	0	8	0	0	8	-	1	0	0	0	1	-	0	0	0	0	0	-	32
% Single-Unit Trucks	0%	2.0%	0%	0%	1.8%	-	0%	0.7%	0%	0%	0.6%	-	20.0%	0%	0%	0%	2.5%	-	0%	0%	0% (0%	0%	-	1.1%
Articulated Trucks	0	25	0	0	25	-	0	16	0	0	16	-	0	0	0	0	0	-	0	0	0	0	0	-	41
% Articulated Trucks	0%	2.2%	0%	0%	1.9%	-	0%	1.3%	0%	0%	1.3%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (0%	0%	-	1.5%
Buses	0	12	0	0	12	-	0	1	0	0	1	-	0	0	0	0	0	-	1	0	1	0	2	-	15
% Buses	0%	1.1%	0%	0%	0.9%	-	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0.6%	0%	3.3%	0%	1.0%	-	0.5%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0% (0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	- 1	00%	-

Arlington Heights Road with Tonne Drive - TMC

Thu May 11, 2023 PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 1071718, Location: 42.043225, -87.980451





Total: 53 [S] Tonne Road

Arlington Heights Rd with Guitar Center Acce... - TMC

Thu Jun 16, 2022 Full Length (7 AM-9 AM, 4 PM-6 PM, 11:30 AM-2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

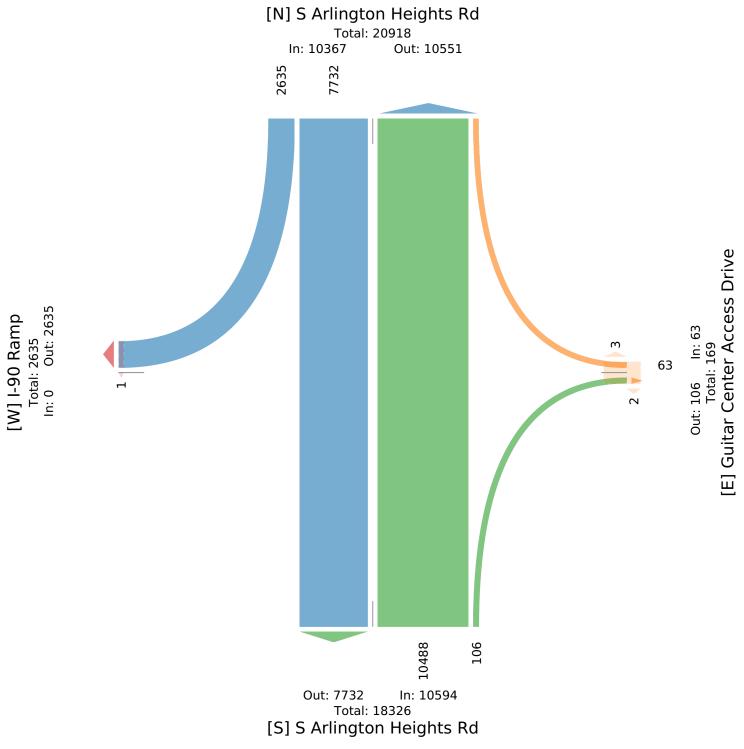


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	I-90 Ra	amp	Guitar C	enter	Acce	ss Drive		S Arlingt	on Heigh	ıts Rd			S Arlingto	on Heigh	ts Rd				
Direction	Eastbo	und	Westbou	nd				Northbou	nd				Southbou	nd					
Time	Арр	Ped*	R	L	U	Арр	Ped*	R	Т	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-16 7:00AM	0	0	0	0	0	0	0	3	273	0	276	0	83	254	0	0	337	0	613
7:15AM	0	0	1	0	0	1	0	4	332	0	336	0	84	263	0	0	347	0	684
7:30AM	0	0	0	0	0	0	0	4	399	0	403	0	94	297	0	0	391	0	794
7:45AM	0	0	0	0	0	0	0	2	469	0	471	0	107	289	0	0	396	0	867
Hourly Total	0	0	1	0	0	1	0	13	1473	0	1486	0	368	1103	0	0	1471	0	2958
8:00AM	0	0	0	0	0	0	0	3	334	0	337	0	78	304	0	0	382	0	719
8:15AM	0	0	1	0	0	1	0	3	378	0	381	0	89	290	0	0	379	0	761
8:30AM	0	0	0	0	0	0	0	3	361	0	364	0	84	274	0	0	358	0	722
8:45AM	0	1	0	0	0	0	0	3	349	0	352	0	82	242	0	0	324	0	676
Hourly Total	0	1	1	0	0	1	0	12	1422	0	1434	0	333	1110	0	0	1443	0	2878
4:00PM	0	0	3	0	0	3	3	4	404	0	408	0	125	370	0	0	495	0	906
4:15PM	0	0	1	0	0	1	0	2	487	0	489	0	106	325	0	0	431	0	921
4:30PM	0	0	3	0	0	3	0	4	468	0	472	0	142	368	0	0	510	0	985
4:45PM	0	0	2	0	0	2	0	6	463	0	469	0	124	323	0	0	447	0	918
Hourly Total	0	0	9	0	0	9	3	16	1822	0	1838	0	497	1386	0	0	1883	0	3730
5:00PM	0	0	4	0	0	4	0	3	532	0	535	0	121	332	0	0	453	0	992
5:15PM	0	0	0	0	0	0	0	1	525	0	526	0	111	330	0	0	441	0	967
5:30PM	0	0	2	0	0	2	0	4	488	0	492	0	99	332	0	0	431	0	925
5:45PM	0	0	2	0	0	2	0	7	486	0	493	0	76	286	0	0	362	0	857
Hourly Total	0	0	8	0	0	8	0	15	2031	0	2046	0	407	1280	0	0	1687	0	3741
2022-06-18 11:30AM	0	0	7	0	0	7	2	7	343	0	350	0	109	306	0	0	415	0	772
11:45AM	0	0	6	0	0	6	0	5	375	0	380	0		299	0	0	404	0	790
Hourly Total	0	0	13	0	0	13	2	12	718	0	730	0		605	0	0	819	0	1562
12:00PM	0	0	3	0	0	3	- 0	8	382	0	390	0		300	0	0	410	0	803
12:15PM	0	0	8	0	0	8	0	4	417	0	421	0		254	0	0	351	0	780
12:30PM	0	0	4	0	0	4	0	4	365	0	369	0	-	269	0	0	374	0	747
12:45PM	0	0	4	0	0	4	0	5	383	0	388	0		269	0	0	369	0	761
Hourly Total	0	0	19	0	0	19	0	21	1547	0	1568	0		1092	0	0	1504	0	3091
1:00PM	0	0	4	0	0	4	0	3	369	0	372	0		314	0	0	397	0	773
1:15PM	0	0	2	0	0	2	0	3	412	0	415	0		266	0	0	356	0	773
1:30PM	0	0	3	0	0	3	0	6	349	0	355	0		260	0	0	384	0	742
1:45PM	0	0	3	0	0	3	0	5	345	0	350	0		316	0	0	423	0	776
Hourly Total	0	0	12	0	0	12	0	17	1475	0	1492	0		1156	0	0	1560	0	3064
		_																	
Total % Approach	0	1	63 100%	0	0	63	5	106	10488	0	10594	0		7732 74.6%	0	0	10367	0	21024
% Approach % Total		-		0% 0%	0%	0.3%	-	1.0% 0.5%	99.0% 49.9%		- 50.4%	-	25.4% 12.5%			0% 0%	- 49.3%	-	-
Lights	0%	-				63	-				10328	-						-	20512
Ŭ Ŭ	-	-	63	0	0		-	105	10223	0		-	2527	7594	0	0	10121	-	
% Lights		-	100%		0%	100%	-	99.1%	97.5%		97.5%	-	95.9%	98.2%			97.6%	-	97.6%
Single-Unit Trucks	0	-	0	0	0	0	-	0	147	0	147	-	48 1.90/	98	0	0	146	-	293
% Single-Unit Trucks		-	0%			0%	-	0%	1.4%		1.4%	-	1.8%	1.3%			1.4%	-	1.4%
Articulated Trucks	0	-	0	0	0	0	-	0	105	0	105	-	57	26	0	0	83	-	188
% Articulated Trucks	-	-	0%		0%	0%	-	0%	1.0%	0%	1.0%	-	2.2%	0.3%			0.8%	-	0.9%
Buses	0	-	0	0	0	0	-	0	13	0	13	-	3	13	0	0	16	-	29
% Buses	-	-	0%			0%	-	0%	0.1%		0.1%	-	0.1%	0.2%			0.2%	-	0.1%
Bicycles on Road	0	-	0	0	0	0	-	1	0	0	1	-	0	1	0	0	1	-	2
% Bicycles on Road	-	-	0%	0%		0%	-	0.9%		0%	0%	-	0%		0%		0%	-	0%
Pedestrians	-	1	-	-	-	-	5	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	100%	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-

Arlington Heights Rd with Guitar Center Acce... - TMC Thu Jun 16, 2022 Full Length (7 AM-9 AM, 4 PM-6 PM, 11:30 AM-2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165





Arlington Heights Rd with Guitar Center Acce... - TMC

Thu Jun 16, 2022 AM Peak (Jun 16 2022 7:30AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

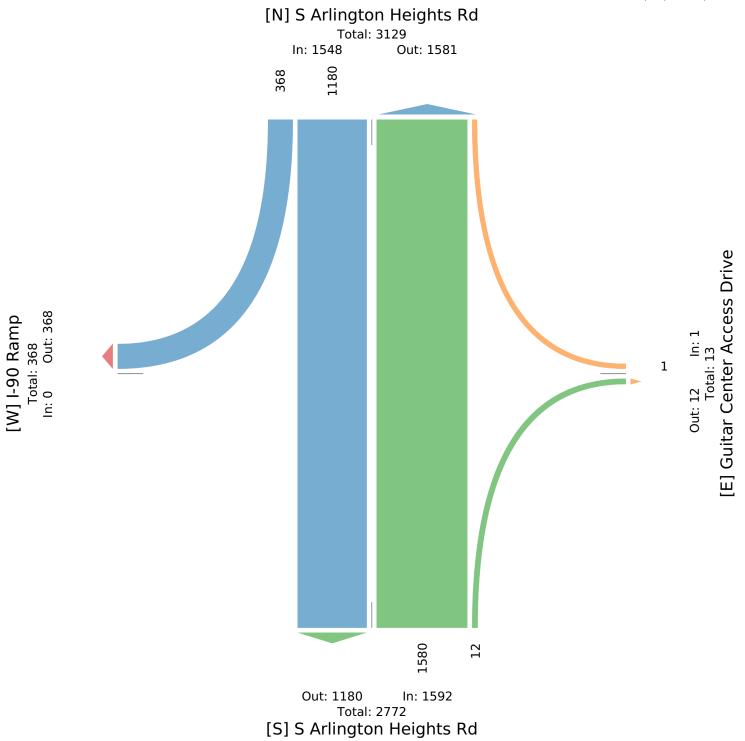


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	I-90 Ra	amp	Guitar C	enter	Acces	ss Drive		S Arling	ton Heig	S Arlingto									
Direction	Eastbo	und	Westbou	nd				Northbo	und	Southbound									
Time	Арр	Ped*	R	L	U	Арр	Ped*	R	Т	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-16 7:30AM	0	0	0	0	0	0	0	4	399	0	403	0	94	297	0	0	391	0	794
7:45AM	0	0	0	0	0	0	0	2	469	0	471	0	107	289	0	0	396	0	867
8:00AM	0	0	0	0	0	0	0	3	334	0	337	0	78	304	0	0	382	0	719
8:15AM	0	0	1	0	0	1	0	3	378	0	381	0	89	290	0	0	379	0	761
Total	0	0	1	0	0	1	0	12	1580	0	1592	0	368	1180	0	0	1548	0	3141
% Approach	-	-	100%	0%	0%	-	-	0.8%	99.2%	0%	-	-	23.8%	76.2%	0%	0%	-	-	-
% Total	0%	-	0%	0%	0%	0%	-	0.4%	50.3%	0%	50.7%	-	11.7%	37.6%	0%	0%	49.3%	-	-
PHF	-	-	0.250	-	-	0.250	-	0.750	0.842	-	0.845	-	0.860	0.970	-	-	0.977	-	0.906
Lights	0	-	1	0	0	1	-	12	1507	0	1519	-	333	1148	0	0	1481	-	3001
% Lights	-	-	100%	0%	0%	100%	-	100%	95.4%	0%	95.4%	-	90.5%	97.3%	0%	0%	95.7%	-	95.5%
Single-Unit Trucks	0	-	0	0	0	0	-	0	37	0	37	-	16	26	0	0	42	-	79
% Single-Unit Trucks	-	-	0%	0%	0%	0%	-	0%	2.3%	0%	2.3%	-	4.3%	2.2%	0%	0%	2.7%	-	2.5%
Articulated Trucks	0	-	0	0	0	0	-	0	32	0	32	-	18	5	0	0	23	-	55
% Articulated Trucks	-	-	0%	0%	0%	0%	-	0%	2.0%	0%	2.0%	-	4.9%	0.4%	0%	0%	1.5%	-	1.8%
Buses	0	-	0	0	0	0	-	0	4	0	4	-	1	1	0	0	2	-	6
% Buses	-	-	0%	0%	0%	0%	-	0%	0.3%	0%	0.3%	-	0.3%	0.1%	0%	0%	0.1%	-	0.2%
Bicycles on Road	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Arlington Heights Rd with Guitar Center Acce... - TMC Thu Jun 16, 2022 AM Peak (Jun 16 2022 7:30AM - 8:30 AM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165





Arlington Heights Rd with Guitar Center Acce... - TMC

Thu Jun 16, 2022 PM Peak (Jun 16 2022 4:30PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

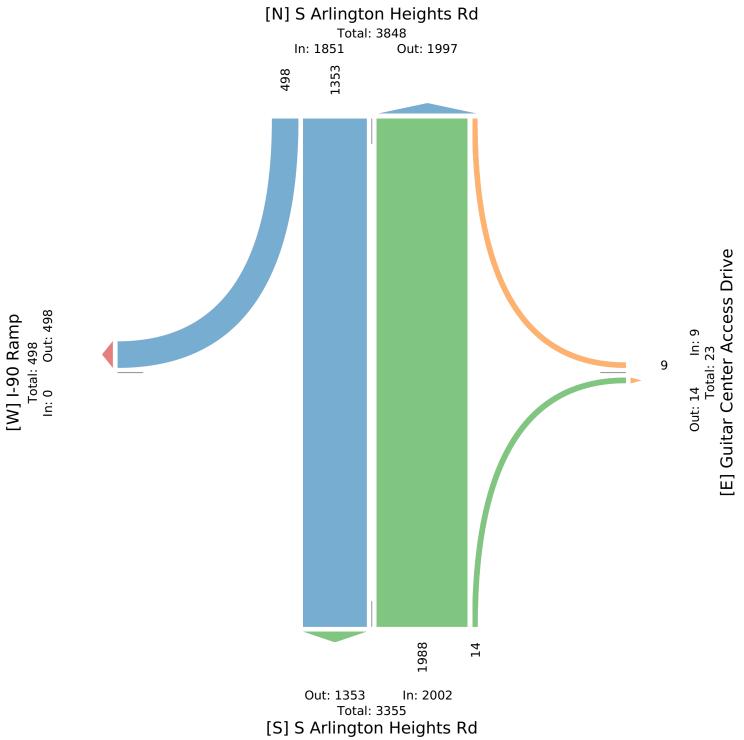


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	I-90 Ra Eastbo		Guitar Co Westbou		Acces	s Drive		S Arling Northbo	0	S Arlington Heights Rd Southbound									
Time	Арр	Ped*	R	L	U	Арр	Ped*	R	Т	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-16 4:30PM	0	0	3	0	0	3	0	4	468	0	472	0	142	368	0	0	510	0	985
4:45PM	0	0	2	0	0	2	0	6	463	0	469	0	124	323	0	0	447	0	918
5:00PM	0	0	4	0	0	4	0	3	532	0	535	0	121	332	0	0	453	0	992
5:15PM	0	0	0	0	0	0	0	1	525	0	526	0	111	330	0	0	441	0	967
Total	0	0	9	0	0	9	0	14	1988	0	2002	0	498	1353	0	0	1851	0	3862
% Approach	-	-	100%	0%	0%	-	-	0.7%	99.3%	0%	-	-	26.9%	73.1%	0%	0%	-	-	-
% Total	0%	-	0.2%	0%	0%	0.2%	-	0.4%	51.5%	0%	51.8%	-	12.9%	35.0%	0%	0%	47.9%	-	-
PHF	-	-	0.563	-	-	0.563	-	0.583	0.934	-	0.936	-	0.877	0.919	-	-	0.907	-	0.973
Lights	0	-	9	0	0	9	-	14	1964	0	1978	-	488	1334	0	0	1822	-	3809
% Lights	-	-	100%	0%	0%	100%	-	100%	98.8%	0%	98.8%	-	98.0%	98.6%	0%	0%	98.4%	-	98.6%
Single-Unit Trucks	0	-	0	0	0	0	-	0	11	0	11	-	4	14	0	0	18	-	29
% Single-Unit Trucks	-	-	0%	0%	0%	0%	-	0%	0.6%	0%	0.5%	-	0.8%	1.0%	0%	0%	1.0%	-	0.8%
Articulated Trucks	0	-	0	0	0	0	-	0	13	0	13	-	6	4	0	0	10	-	23
% Articulated Trucks	-	-	0%	0%	0%	0%	-	0%	0.7%	0%	0.6%	-	1.2%	0.3%	0%	0%	0.5%	-	0.6%
Buses	0	-	0	0	0	0	-	0	0	0	0	-	0	1	0	0	1	-	1
% Buses	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%
Bicycles on Road	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Arlington Heights Rd with Guitar Center Acce... - TMC Thu Jun 16, 2022 PM Peak (Jun 16 2022 4:30PM - 5:30 PM) - Overall Peak Hour All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165





Arlington Heights Rd with Guitar Center Acce... - TMC Sat Jun 18, 2022 Midday Peak (WKND) (Jun 18 2022 11:30AM - 12:30 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

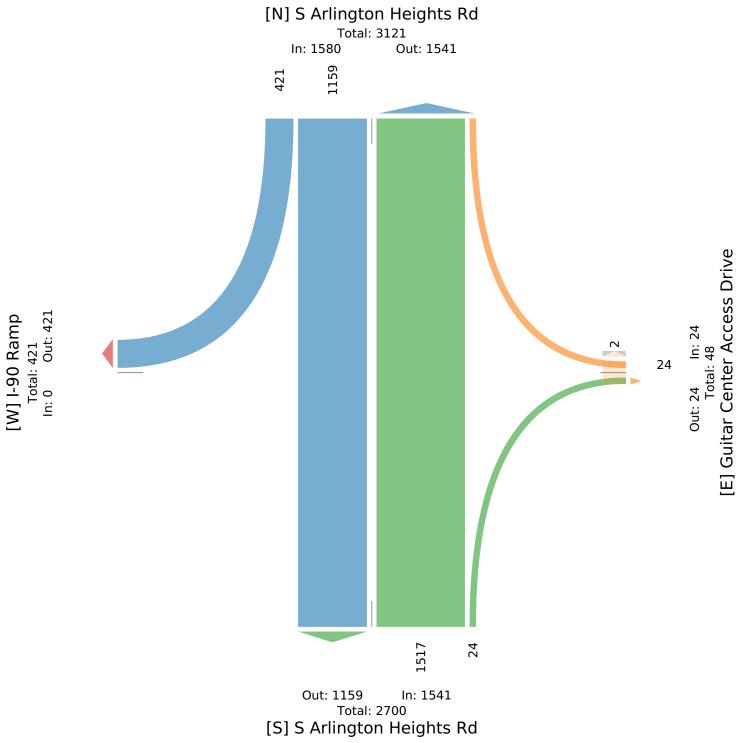


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg	• •				Acce	ss Drive		Ŭ Ŭ	ton Heig	hts Ro	d		S Arlingt						
Direction				ınd				Northbo	und	Southbou									
Time	Арр	Ped*	R	L	U	Арр	Ped*	R	Т	U	Арр	Ped*	R	Т	L	U	Арр	Ped*	Int
2022-06-18 11:30AM	0	0	7	0	0	7	2	7	343	0	350	0	109	306	0	0	415	0	772
11:45AM	0	0	6	0	0	6	0	5	375	0	380	0	105	299	0	0	404	0	790
12:00PM	0	0	3	0	0	3	0	8	382	0	390	0	110	300	0	0	410	0	803
12:15PM	0	0	8	0	0	8	0	4	417	0	421	0	97	254	0	0	351	0	780
Total	0	0	24	0	0	24	2	24	1517	0	1541	0	421	1159	0	0	1580	0	3145
% Approach	-	-	100%	0%	0%	-	-	1.6%	98.4%	0%	-	-	26.6%	73.4%	0%	0%	-	-	-
% Total	0%	-	0.8%	0%	0%	0.8%	-	0.8%	48.2%	0%	49.0%	-	13.4%	36.9%	0%	0%	50.2%	-	-
PHF	-	-	0.750	-	-	0.750	-	0.750	0.909	-	0.915	-	0.957	0.947	-	-	0.952	-	0.979
Lights	0	-	24	0	0	24	-	24	1491	0	1515	-	411	1148	0	0	1559	-	3098
% Lights	-	-	100%	0%	0%	100%	-	100%	98.3%	0%	98.3%	-	97.6%	99.1%	0%	0%	98.7%	-	98.5%
Single-Unit Trucks	0	-	0	0	0	0	-	0	15	0	15	-	5	8	0	0	13	-	28
% Single-Unit Trucks	-	-	0%	0%	0%	0%	-	0%	1.0%	0%	1.0%	-	1.2%	0.7%	0%	0%	0.8%	-	0.9%
Articulated Trucks	0	-	0	0	0	0	-	0	9	0	9	-	5	1	0	0	6	-	15
% Articulated Trucks	-	-	0%	0%	0%	0%	-	0%	0.6%	0%	0.6%	-	1.2%	0.1%	0%	0%	0.4%	-	0.5%
Buses	0	-	0	0	0	0	-	0	2	0	2	-	0	2	0	0	2	-	4
% Buses	-	-	0%	0%	0%	0%	-	0%	0.1%	0%	0.1%	-	0%	0.2%	0%	0%	0.1%	-	0.1%
Bicycles on Road	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	0	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-

Arlington Heights Rd with Guitar Center Acce... - TMC Sat Jun 18, 2022 Midday Peak (WKND) (Jun 18 2022 11:30AM - 12:30 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165





Arlington Heights Rd with Guitar Center Acce... - TMC Sat Jun 18, 2022 PM Peak (WKND) (Jun 18 2022 1PM - 2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

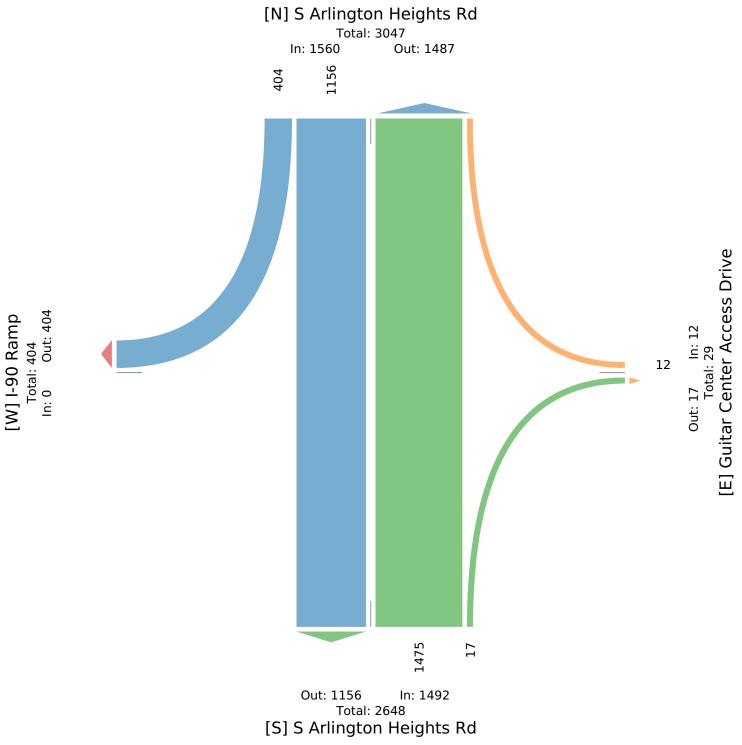


Provided by: Kenig Lindgren O'Hara Aboona, Inc. 9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

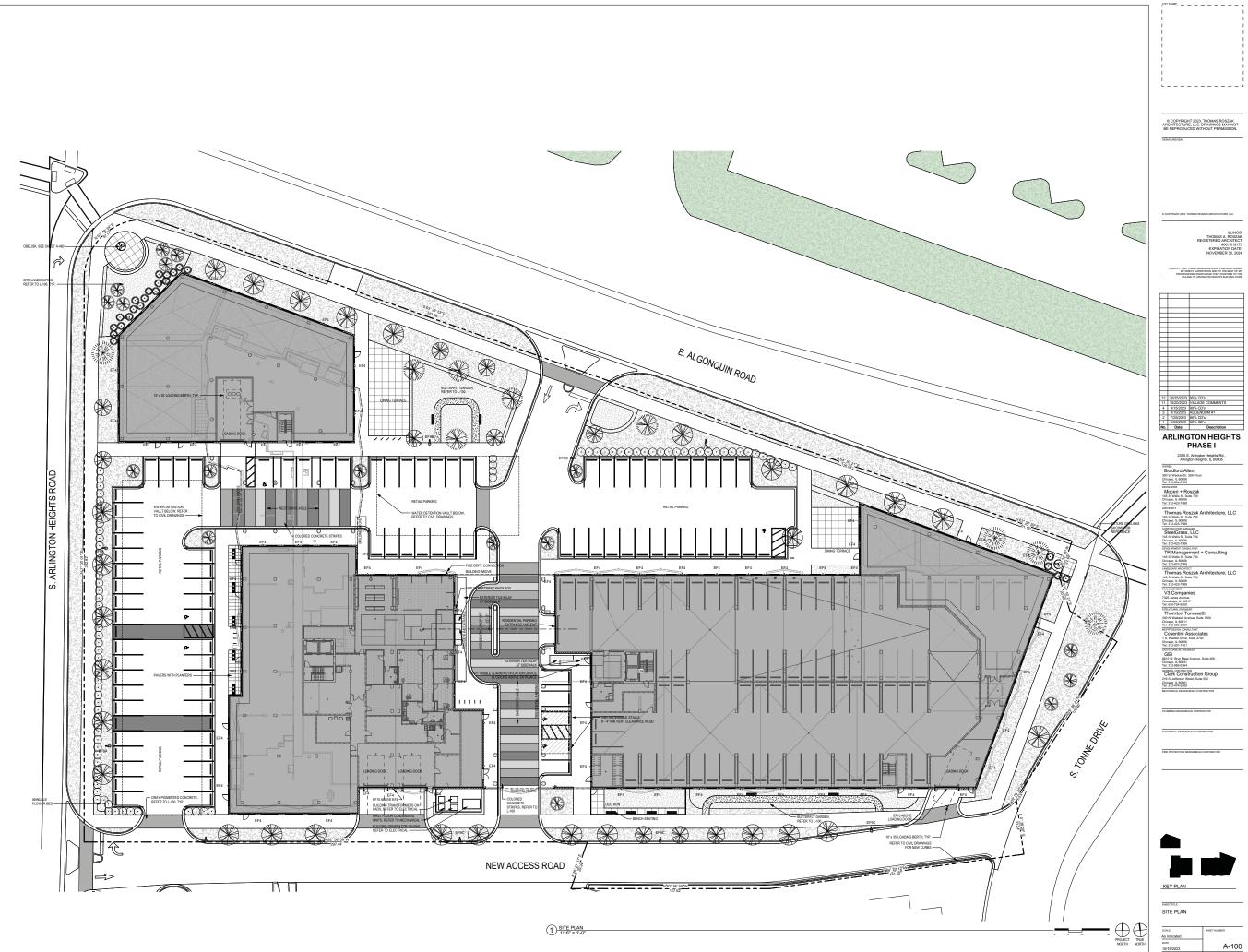
Leg Directi	on	I-90 Ramp Eastbound			enter nd	Acces	s Drive		S Arlingto Northbou	U	S Arlingto Southbou									
Time		Арр	Ped*		L	U	Арр	Ped*	R	T	U	Арр	Ped*	R	T	L	U	Арр	Ped*	Int
	2022-06-18 1:00PM	0	0	4	0	0	4	0	3	369	0	372	0	83	314	0	0	397	0	773
	1:15PM	0	0	2	0	0	2	0	3	412	0	415	0	90	266	0	0	356	0	773
	1:30PM	0	0	3	0	0	3	0	6	349	0	355	0	124	260	0	0	384	0	742
	1:45PM	0	0	3	0	0	3	0	5	345	0	350	0	107	316	0	0	423	0	776
	Total	0	0	12	0	0	12	0	17	1475	0	1492	0	404	1156	0	0	1560	0	3064
	% Approach	-	-	100%	0%	0%	-	-	1.1%	98.9%	0%	-	-	25.9%	74.1%	0%	0%	-	-	-
	% Total	0%	-	0.4%	0%	0%	0.4%	-	0.6%	48.1%	0%	48.7%	-	13.2%	37.7%	0%	0%	50.9%	-	-
	PHF	-	-	0.750	-	-	0.750	-	0.800	0.895	-	0.898	-	0.815	0.915	-	-	0.922	-	0.987
	Lights	0	-	12	0	0	12	-	16	1452	0	1468	-	395	1143	0	0	1538	-	3018
	% Lights	-	-	100%	0%	0%	100%	-	94.1%	98.4%	0%	98.4%	-	97.8%	98.9%	0%	0%	98.6%	-	98.5%
	Single-Unit Trucks	0	-	0	0	0	0	-	0	22	0	22	-	9	10	0	0	19	-	41
%	6 Single-Unit Trucks	-	-	0%	0%	0%	0%	-	0%	1.5%	0%	1.5%	-	2.2%	0.9%	0%	0%	1.2%	-	1.3%
	Articulated Trucks	0	-	0	0	0	0	-	0	1	0	1	-	0	1	0	0	1	-	2
9	% Articulated Trucks	-	-	0%	0%	0%	0%	-	0%	0.1%	0%	0.1%	-	0%	0.1%	0%	0%	0.1%	-	0.1%
	Buses	0	-	0	0	0	0	-	0	0	0	0	-	0	2	0	0	2	-	2
	% Buses	-	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.1%	-	0.1%
	Bicycles on Road	0	-	0	0	0	0	-	1	0	0	1	-	0	0	0	0	0	-	1
	% Bicycles on Road	-	-	0%	0%	0%	0%	-	5.9%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%
	Pedestrians	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	
	% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Arlington Heights Rd with Guitar Center Acce... - TMC Sat Jun 18, 2022 PM Peak (WKND) (Jun 18 2022 1PM - 2 PM) All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road) All Movements ID: 966112, Location: 42.042814, -87.983165

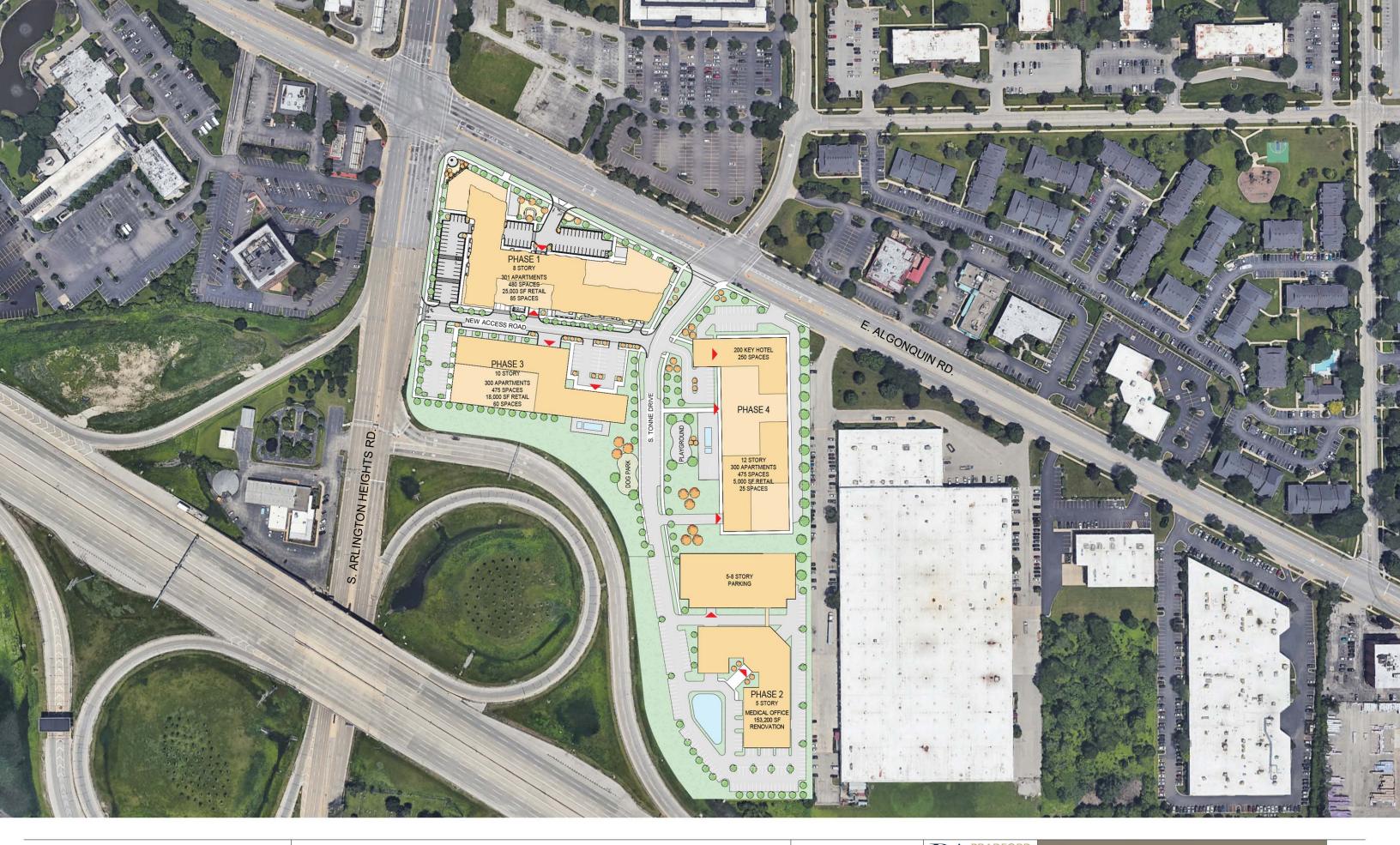




Site Plan



CALE	SHEET NUMBER
s indicated	
ATE	A 400
0/16/2023	A-100



Arlington Heights Gateway

Sheet Title: SITE PLAN - TRAFFIC STUDY - ALL PHASES

Date: 10/17/2023 BAALLEN

SEC of Algonquin Rd & Arlington Heights Rd, Arlington Heights, IL 60005

Thomas Roszak Architecture, LLC

145 S. Wells Street, 700, Chicago, IL 60606

CMAP Projections Letter



433 West Van Buren Street Suite 450 Chicago, IL 60607

> 312-454-0400 cmap.illinois.gov

July 19, 2022

Shahrzad Ainkeshavarzi Consultant Kenig, Lindgren, O'Hara, Aboona, Inc. 9575 West Higgins Road, Suite 400 Rosemont, IL, 60018

Subject: Arlington Heights Road @ Algonquin Road IDOT

Dear Mr. Ainkeshavarzi:

In response to a request made on your behalf and dated July 18, 2022, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
South Arlington Heights Rd South of Algonquin Rd	38,800	45,100
South Arlington Heights Road North of Algonquin Rd	26,700	31,500
West Algonquin Rd West of South Arlington Heights Rd	24,000	27,200
East Algonquin Rd East of South Arlington Heights Rd	17,100	21,800
I-90 Westbound to Arlington Heights Northbound Exit	9,200	11,000

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP Senior Planner, Research & Analysis

cc: Rios (IDOT) S:\AdminGroups\ResearchAnalysis\2022_ForecastTraffic\ArlingtonHeights\ck-96-22\ck-96-22.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized	Signalized Intersections										
Level of Service	Interpretation Average Control Delay (seconds per vehic										
А	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping. ≤ 10										
В	Good progression, with more ve Level of Service A.	hicles stopping than for	> 10 - 20								
С	Individual cycle failures (i.e., one are not able to depart as a result during the cycle) may begin to ap stopping is significant, although through the intersection without s	t of insufficient capacity pear. Number of vehicles many vehicles still pass	> 20 - 35								
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable. $> 35 - 55$										
E	Progression is unfavorable. The vehicle high and the cycle length is long. are frequent.		> 55 - 80								
F	The volume-to-capacity ratio is very poor, and the cycle length is clear the queue.		> 80								
Unsignalize	ed Intersections										
	Level of Service	Average Total	Delay (sec/veh)								
	А	0 -	10								
	В	> 10	- 15								
	C > 15 - 25										
	D > 25 - 35										
	E	> 35	- 50								
	F	> 5	50								
Source: Highw	way Capacity Manual, 6th Edition.										

<u>Capacity Analysis Summary Sheets</u> Weekday Morning Peak Hour – Existing Conditions

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

06/05/2023	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ካካ	^	1	ካካ	^	1	ሻሻ	^	1	ኘኘ	4111	
Traffic Volume (vph)	44	584	323	330	534	156	390	987	360	123	969	89
Future Volume (vph)	44	584	323	330	534	156	390	987	360	123	969	89
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230		-	250		-	300		-	280		-
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt			0.850		0.0.	0.850	0.01		0.850	0.01	0.987	0.00
Flt Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950	0.001	
Satd. Flow (prot)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Flt Permitted	0.950	0200	1000	0.950	0000		0.950	0001	1100	0.950	0000	Ű
Satd. Flow (perm)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Right Turn on Red	0001	0200	No	0000	0000	No	0000	0001	No	0100	0000	No
Satd. Flow (RTOR)			110			110			110			110
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	5%	4%	6%	8%	12%	5%	3%	8%	10%	2%	1%
Shared Lane Traffic (%)	- 70	0/0	7/0	070	070	12/0	070	070	070	1070	270	170
Lane Group Flow (vph)	45	596	330	337	545	159	398	1007	367	126	1080	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	U
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases	,	т	4	Ū	0	8	Ū	2	2		U	
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase	•	•	•	Ū	Ŭ	•	U	_	Ū	•	Ŭ	
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	17.0	38.0	31.0	36.0	57.0	18.0	31.0	58.0	36.0	18.0	45.0	
Total Split (%)	11.3%	25.3%	20.7%	24.0%	38.0%	12.0%	20.7%	38.7%	24.0%	12.0%	30.0%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	7.4	32.0	61.0	21.3	47.9	64.9	23.0	64.6	91.9	11.1	52.7	
Actuated g/C Ratio	0.05	0.21	0.41	0.14	0.32	0.43	0.15	0.43	0.61	0.07	0.35	
v/c Ratio	0.27	0.54	0.52	0.72	0.34	0.25	0.78	0.44	0.40	0.54	0.49	
Control Delay	72.2	53.9	35.8	64.9	33.4	24.2	78.0	22.9	12.9	75.3	40.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.2	53.9	35.8	64.9	33.4	24.2	78.0	22.9	12.9	75.3	40.8	
LOS	F	D	D	64.5 E	ч. С	24.2 C	70.0 E	22.5 C	12.3 B	70.0 E	40.0 D	
Approach Delay	L	48.6	5	L	42.2	J	L	33.2	5	L	44.4	
Approach LOS		-0.0 D			<u>۲۲.۲</u>			00.2 C			D	
Queue Length 50th (ft)	22	190	236	168	163	118	202	206	155	62	245	
Queue Length 95th (ft)	44	227	309	157	103	70	m240	233	m183	96	317	
						10		200			V 11	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

06/05/2023	
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	280	1173	668	693	1744	647	589	2284	1018	286	2224	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.51	0.49	0.49	0.31	0.25	0.68	0.44	0.36	0.44	0.49	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150)											
Offset: 58 (39%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	Start of	Green							
Natural Cycle: 80												
Control Type: Actuated-Coo	ordinated											
Maximum v/c Ratio: 0.78												
Intersection Signal Delay: 4					tersectior							
						of Service	С					
Analysis Period (min) 15												
m Volume for 95th percer	ntile queue is	s metered	l by upstr	eam sign	al.							
Splits and Phases: 1: Arlington Heights Road & Algonquin Road												

Ø1	Ø2 (R)	1 03	₩ Ø4
18 s	58 s	36 s	38 s
A Ø5	🛛 🕇 🖉 Ø6 (R)		▲ Ø8
31 s	45 s	17 s	57 s

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	ሻ	ተተ ጮ		ኘ	A		ሻ	4Î		ሻ	4î	
Traffic Volume (vph)	96	951	20	7	868	15	3	1	4	16	1	165
Future Volume (vph)	96	951	20	7	868	15	3	1	4	16	1	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.880			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4840	0	1805	4746	0	1805	1393	0	1703	1601	0
Flt Permitted	0.263			0.259			0.411			0.754		
Satd. Flow (perm)	485	4840	0	492	4746	0	781	1393	0	1352	1601	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	7%	0%	0%	9%	7%	0%	0%	25%	6%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	1056	0	8	959	0	3	5	0	17	180	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	24.0	102.0		13.0	91.0		35.0	35.0		35.0	35.0	
Total Split (%)	16.0%	68.0%		8.7%	60.7%		23.3%	23.3%		23.3%	23.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	117.9	113.5		112.4	104.2		22.6	22.6		22.6	22.6	
Actuated g/C Ratio	0.79	0.76		0.75	0.69		0.15	0.15		0.15	0.15	
v/c Ratio	0.23	0.29		0.02	0.29		0.03	0.02		0.08	0.75	
Control Delay	5.5	5.4		4.1	11.0		51.3	51.0		52.9	79.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.5	5.4		4.1	11.0		51.3	51.0		52.9	79.1	
LOS	А	А		А	В		D	D		D	E	
Approach Delay		5.4			10.9			51.1			76.8	
Approach LOS		А			В			D			E	
Queue Length 50th (ft)	16	75		1	141		3	4		14	170	
Queue Length 95th (ft)	37	128		m4	208		12	17		37	247	
Queue Length 95th (ft)	37	128		m4	208		12	17		37	247	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	554	3660		464	3298		150	269		261	309	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.19	0.29		0.02	0.29		0.02	0.02		0.07	0.58	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	50											
Offset: 115 (77%), Refere	nced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.75												
Intersection Signal Delay:	13.9			In	tersectior	n LOS: B						
Intersection Capacity Utilization 46.0% ICU Level of Service A												
Analysis Period (min) 15												
m Volume for 95th percentile queue is metered by upstream signal.												
Splits and Phases: 2: Tonne Road & Algonquin Road												
									1	04		

Ø1		K _{₽Ø4}
13 s	102 s	35 s
_ # Ø5	♥ ▼ Ø6 (R)	™ ø8
24 s	91s	35 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/2023	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>۲</u>	A		<u>۲</u>	A			\$		٦	¢Î	
Traffic Volume (vph)	26	853	5	1	797	25	3	0	0	53	2	50
Future Volume (vph)	26	853	5	1	797	25	3	0	0	53	2	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	165		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	130			100			25			80		-
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.995						0.855	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1671	3372	0	1805	3271	0	0	1805	0	1736	1536	0
Flt Permitted	0.304			0.313				0.721		0.756		-
Satd. Flow (perm)	535	3372	0	595	3271	0	0	1370	0	1381	1536	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1142			483			222			765	
Travel Time (s)		17.3			7.3			6.1			20.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	7%	0%	0%	10%	4%	0%	0%	0%	4%	0%	6%
Shared Lane Traffic (%)	0,0	170	0,0	0,0	1070	170	0,0	0,0	0,0	170	0,0	0,0
Lane Group Flow (vph)	28	912	0	1	875	0	0	3	0	56	55	0
Turn Type	pm+pt	NA		Perm	NA	•	Perm	NĂ	•	Perm	NA	v
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		24.0	24.0		18.0	18.0		18.0	18.0	
Total Split (s)	14.0	132.0		118.0	118.0		18.0	18.0		18.0	18.0	
Total Split (%)	9.3%	88.0%		78.7%	78.7%		12.0%	12.0%		12.0%	12.0%	
Yellow Time (s)	3.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		6.0	6.0			6.0		6.0	6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)	130.8	129.5		123.7	123.7			12.5		12.5	12.5	
Actuated g/C Ratio	0.87	0.86		0.82	0.82			0.08		0.08	0.08	
v/c Ratio	0.05	0.31		0.00	0.32			0.03		0.49	0.43	
Control Delay	3.0	4.9		5.0	4.9			61.0		79.0	74.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	3.0	4.9		5.0	4.9			61.0		79.0	74.7	
LOS	А	А		А	А			Е		E	Е	
Approach Delay		4.8			4.9			61.0			76.9	
Approach LOS		А			А			E			E	
Queue Length 50th (ft)	1	30		0	121			3		53	52	
Queue Length 95th (ft)	26	303		2	175			13		99	98	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	546	2947		492	2703			124		125	139	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.05	0.31		0.00	0.32			0.02		0.45	0.40	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	50											
Offset: 94 (63%), Referen	ced to phase	2:EBTL a	and 6:WB	TL, Start	of Green							
Natural Cycle: 55												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.49												
Intersection Signal Delay:	9.1			In	tersectior	n LOS: A						
Intersection Capacity Utiliz	zation 40.4%			IC	CU Level of	of Service	A					
Analysis Period (min) 15												
Solite and Phases: 3: G	oohhart Roa	d & Alaon	auin Roa	Ч								

Splits and Phases: 3: Goebbert Road & Algonquin Road

ø2 (R)♥	₽ Ø4
132 s	18 s
Ø5 ♥ Ø6 (R)	↑ Ø8
14s 118s	18 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$		ሻ	र्स	11	<u> </u>	<u> </u>			4111Þ	
Traffic Volume (vph)	0	0	4	262	Ō	509	3	1226	0	0	1251	3
Future Volume (vph)	0	0	4	262	0	509	3	1226	0	0	1251	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt		0.865				0.850						
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Flt Permitted				0.950	0.950		0.950					
Satd. Flow (perm)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	50%	1%	0%	3%	0%	6%	0%	0%	2%	67%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	4	0	142	143	553	3	1333	0	0	1363	0
Turn Type		NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		40.0	40.0	40.0	16.0	94.0			78.0	
Total Split (%)	10.7%	10.7%		26.7%	26.7%	26.7%	10.7%	62.7%			52.0%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		36.1	36.1	36.1	5.9	99.0			96.8	
Actuated g/C Ratio		0.05		0.24	0.24	0.24	0.04	0.66			0.65	
v/c Ratio		0.07		0.35	0.35	0.83	0.04	0.39			0.33	
Control Delay		69.8		49.5	49.5	65.7	70.3	12.8			7.7	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		69.8		49.5	49.5	65.7	70.3	12.8			7.7	
LOS		Е		D	D	E	E	В			А	
Approach Delay		69.8			60.2			12.9			7.7	
Approach LOS		E			E			В			А	
Queue Length 50th (ft)		4		120	121	288	3	202			80	
Queue Length 95th (ft)		17		194	195	#396	15	291			122	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings	
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp)

06/05/2023	06/	05/	20	23
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300	155					
Base Capacity (vph)		73		417	417	678	138	3398			4127	
Starvation Cap Reductn		0		0	0	0	0	0			0	
Spillback Cap Reductn		0		0	0	0	0	0			0	
Storage Cap Reductn		0		0	0	0	0	0			0	
Reduced v/c Ratio		0.05		0.34	0.34	0.82	0.02	0.39			0.33	
Intersection Summary												
Area Type: (Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 61 (41%), Reference	d to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 75												
Control Type: Actuated-Coor	rdinated											
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 22				In	tersectior	n LOS: C						
Intersection Capacity Utilizat	ion 62.0%			IC	U Level o	of Service	В					
Analysis Period (min) 15												
# 95th percentile volume e	xceeds cap	bacity, qu	eue may	be longer								
Queue shown is maximur	m after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

DØ2 (R)	,	 Ø4	₽ _{Ø8}
94 s		16 s	40 s
▲ø5	Ø6 (R)		
16 s	78 s		

Intersection Capacity Utilization

	≯	-	\mathbf{i}	•	-	•	•	t	~	1	Ļ	~
Novement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SB
ane Configurations						1		<u>ተተ</u> ጮ			1111	
/olume (vph)	0	0	0	0	0	2	0	1735	12	0	1254	36
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			Ν
deal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	190
ost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4
/linimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	12
/olume Combined (vph)	0	0	0	0	0	2	0	1747	0	0	1254	36
ane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.(
urning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.8
Saturated Flow (vph)	0	0	0	0	0	1615	0	5170	0	0	7264	16
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	40.5	0.0	0.0	20.7	27
Adj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	8.0	0.0	44.5	0.0	0.0	24.7	31
Permitted Option												
Adj Saturation A (vph)	0	0		0	0		0	1723		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	40.5		0.0	20.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			0.0			40.5			20.7	
Adj Reference Time (s)		8.0			8.0			44.5			24.7	
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	40.5		0.0	20.7	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	40.3		0.0	20.7	
Reference Time (s)	0.0	0.0		0.0	0.0		40.5	40.5		20.7	20.7	
di Reference Time (s)	0.0	0.0		0.0	0.0		44.5	44.5		24.7	24.7	
Summary	EB WB		NB SB		mbined							
Protected Option (s)	0.0		44.5		mbineu							
Permitted Option (s)	8.0		44.5									
Split Option (s)	0.0		69.3									
<i>I</i> inimum (s)	0.0		44.5		44.5							
Right Turns	WBR	SBR										
dj Reference Time (s)	8.0	31.3										
Cross Thru Ref Time (s)	44.5	0.0										
Discoming Left Ref Time (s)	0.0	0.0										
Combined (s)	52.5	31.3										
	52.5	01.0										

Reference Times and Phasing Options do not represent an optimized timing plan.

AMEX 23-086 - Mixed-Use Development - Arlington Heights 10:02 am 07/19/2022 Existing Weekday Morning Peak Hou&ynchro 11 Report sa/bsm Page 1

<u>Capacity Analysis Summary Sheets</u> Weekday Evening Peak Hour – Existing Conditions

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

06/05/2023	3
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Lane Group EE	BL EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ካ ተተተ	1	ኘኘ	^	1	ሻሻ	<u></u>	1	ሻሻ	4111	
	37 736		438	808	215	487	1251	453	193	1201	95
	37 736		438	808	215	487	1251	453	193	1201	95
Ideal Flow (vphpl) 190			1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft) 13		400	360		210	350		380	265		0
Storage Lanes	2	1	2		1	2		1	2		Ű
Taper Length (ft) 23		•	250		•	300		•	280		Ū
Lane Util. Factor 0.9		1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt	0.01	0.850	0.07	0.01	0.850	0.01	0.01	0.850	0.01	0.989	0.00
Flt Protected 0.95	50	0.000	0.950		0.000	0.950		0.000	0.950	0.000	
Satd. Flow (prot) 350		1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Flt Permitted 0.95		1010	0.950	0000	1000	0.950	0400	1000	0.950	0400	Ū
Satd. Flow (perm) 350		1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Right Turn on Red	2 0101	No	0-100	5555	No	0-107	5400	No	5501	0-100	No
Satd. Flow (RTOR)		NU			NU			NU			NU
Link Speed (mph)	45			45			35			35	
Link Distance (ft)	864			394			463			944	
Travel Time (s)	13.1			6.0			9.0			18.4	
Peak Hour Factor 0.9			0.95	0.95	0.95	0.95	9.0 0.95	0.95	0.95	0.95	0.95
	% 0.95 % 6%		2%	2%	1%	1%	1%	3%	4%	1%	0.95
, , , ,	70 070	U70	Ζ70	Ζ70	170	170	170	3%	4 70	I 70	170
Shared Lane Traffic (%)	0 775	470	464	054	000	E10	1017	177	202	1004	0
	2 775		461	851	226	513	1317	477	203	1364	0
Turn Type Pr			Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	_
Protected Phases	7 4		3	8	1	5	2	3	1	6	
Permitted Phases	7 4	4	2	0	8	~	0	2	1	<u>^</u>	
Detector Phase	7 4	5	3	8	1	5	2	3	1	6	
Switch Phase	0 45 0		2.0	45.0	2.0	2.0	45.0	2.0	2.0	450	_
()	.0 15.0		3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
1 (7	.5 24.0		9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	_
Total Split (s) 15			31.0	58.0	20.0	33.0	57.0	31.0	20.0	44.0	
Total Split (%) 10.0			20.7%	38.7%	13.3%	22.0%	38.0%	20.7%	13.3%	29.3%	
	.5 4.5		3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
	.0 1.5		1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
2 ()	.0 0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
()	.5 6.0		4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag Lea			Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize? Ye			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode Nor			None	None	None	None	C-Min	None	None	C-Min	
\ /	.1 36.0		24.6	51.5	71.2	26.7	54.8	85.3	13.7	41.8	
Actuated g/C Ratio 0.0			0.16	0.34	0.47	0.18	0.37	0.57	0.09	0.28	
v/c Ratio 0.4			0.82	0.46	0.30	0.83	0.67	0.54	0.66	0.77	
Control Delay 74			88.1	33.3	20.4	57.7	38.6	27.5	76.5	53.8	
	.0 0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay 74			88.1	33.3	20.4	57.7	38.6	27.5	76.5	53.8	
LOS	E D		F	С	С	E	D	С	E	D	
Approach Delay	48.7			47.8			40.6			56.8	
Approach LOS	D			D			D			E	
U ()	5 250		221	157	85	239	433	354	100	370	
Queue Length 95th (ft)	75 299	466	305	180	114	286	492	514	143	417	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	245	1254	759	606	1880	777	658	1974	912	347	1782	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.62	0.62	0.76	0.45	0.29	0.78	0.67	0.52	0.59	0.77	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 77 (51%), Reference	d to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 90												
Control Type: Actuated-Coo	rdinated											
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 47					tersectior							
Intersection Capacity Utilization	tion 76.4%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
			0 41	. D								
Splits and Phases: 1: Arlin	ngton Heigl	nts Road	& Algonq	uin Road								
Ø1 Ø2	(R)				- ₹	lø3		-	1 Ø4			

[*] Ø1	Ø2 (R)	▼ ¶Ø3	₩ 04	
20 s	57 s	31 s	42 s	
🐴 ø5	🛛 🗸 🖉 Ø6 (R)		4 [♠] Ø8	
33 s	44 s	15 s	58 s	

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	<u>۲</u>	<u>ተ</u> ተኈ		۲.	ተተቡ		ľ	eî		۲ ۲	eî.	
Traffic Volume (vph)	176	1199	7	6	1244	24	29	6	5	30	0	66
Future Volume (vph)	176	1199	7	6	1244	24	29	6	5	30	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.997			0.932			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4936	0	1805	5072	0	1805	1623	0	1752	1599	0
Flt Permitted	0.173			0.204			0.711			0.750		
Satd. Flow (perm)	329	4936	0	388	5072	0	1351	1623	0	1383	1599	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	1283	0	6	1349	0	31	11	0	32	70	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	14.0	108.0		14.0	108.0		28.0	28.0		28.0	28.0	
Total Split (%)	9.3%	72.0%		9.3%	72.0%		18.7%	18.7%		18.7%	18.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	130.4	127.3		124.5	116.4		12.9	12.9		12.9	12.9	
Actuated g/C Ratio	0.87	0.85		0.83	0.78		0.09	0.09		0.09	0.09	
v/c Ratio	0.51	0.31		0.02	0.34		0.27	0.08		0.27	0.51	
Control Delay	15.4	2.9		1.5	3.0		68.3	62.0		68.3	77.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.4	2.9		1.5	3.0		68.3	62.0		68.3	77.8	
LOS	В	A		A	A		E	E		E	E	
Approach Delay		4.5			3.0			66.7		_	74.8	
Approach LOS		A			A			E			E	
Queue Length 50th (ft)	38	66		0	51		29	10		30	67	
Queue Length 95th (ft)	77	117		m1	58		63	31		65	117	
					00		00			00		

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	389	4188		433	3937		198	238		202	234	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.48	0.31		0.01	0.34		0.16	0.05		0.16	0.30	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	0											
Offset: 140 (93%), Referen	nced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.51												
Intersection Signal Delay:	7.1			In	tersectior	n LOS: A						
Intersection Capacity Utilization 56.0% ICU Level of Service B												
Analysis Period (min) 15												
m Volume for 95th perce	entile queue i	s metered	l by upstr	eam sign	ial.							
Splits and Phases: 2: To	onne Road &	ΔΙαοραμί	n Road									
		Rigoriqui	nnoau									
61 TO2 (B)										A-04		

Ø1	₩ ₩ 2 (R)	[™] ₀ _{Ø4}
14 s	108 s	28 s
_ * ø5	Ø6 (R)	1 08
14 s	108 s	28 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>ک</u>	A		ľ	A			\$		7	¢Î	
Traffic Volume (vph)	57	1068	5	2	1178	80	6	1	1	55	3	44
Future Volume (vph)	57	1068	5	2	1178	80	6	1	1	55	3	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	165		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	130		-	100		-	25		-	80		-
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.990			0.983			0.859	
Flt Protected	0.950			0.950	0.000			0.964		0.950		
Satd. Flow (prot)	1805	3435	0	1805	3506	0	0	1600	0	1805	1632	0
Flt Permitted	0.181	0100	Ű	0.255	0000	Ŭ	Ŭ	0.784	Ŭ	0.752	1002	Ű
Satd. Flow (perm)	344	3435	0	484	3506	0	0	1302	0	1429	1632	0
Right Turn on Red	U II	0100	No	101	0000	No	Ŭ	1002	No	1120	1002	No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1142			483			222			765	
Travel Time (s)		17.3			7.3			6.1			20.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.1	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0.90	0.90 5%	0.90	0.90	2%	1%	0.90	100%	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)	0 /0	570	0 /0	0 /0	∠ /0	I /0	0 /0	100 /0	0 /0	0 /0	0 /0	0 /0
	59	1118	0	2	1310	0	0	8	0	57	49	0
Lane Group Flow (vph)		NA	U	∠ Perm	NA	U	Perm	NA	U	Perm	49 NA	U
Turn Type Protected Phases	pm+pt	NA 2		Penn	NA 6		Penn	NA 8		Perm	NA 4	
Protected Phases Permitted Phases	5 2	2		6	0		0	0		1	4	
	5	2		6 6	6		8 8	8		4	1	
Detector Phase	C	2		0	0		0	0		4	4	
Switch Phase	2.0	45.0		45.0	45.0		0.0	0.0		0.0	0.0	
Minimum Initial (s)	3.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		24.0	24.0		18.0	18.0		18.0	18.0	
Total Split (s)	14.0	125.0		111.0	111.0		25.0	25.0		25.0	25.0	
Total Split (%)	9.3%	83.3%		74.0%	74.0%		16.7%	16.7%		16.7%	16.7%	
Yellow Time (s)	3.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		6.0	6.0			6.0		6.0	6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes	0.14		Yes	Yes							
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)	130.9	129.6		121.7	121.7			12.4		12.4	12.4	
Actuated g/C Ratio	0.87	0.86		0.81	0.81			0.08		0.08	0.08	
v/c Ratio	0.16	0.38		0.01	0.46			0.07		0.48	0.37	
Control Delay	2.9	3.2		5.0	6.5			62.8		78.5	71.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	2.9	3.2		5.0	6.5			62.8		78.5	71.5	
LOS	А	А		A	Α			E		E	E	
Approach Delay		3.2			6.5			62.8			75.3	
Approach LOS		А			А			E			E	
Queue Length 50th (ft)	8	85		0	214			7		54	46	
Queue Length 95th (ft)	15	117		3	301			25		101	89	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/202	23
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	402	2968		392	2844			164		181	206	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.15	0.38		0.01	0.46			0.05		0.31	0.24	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 120 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.48												
Intersection Signal Delay:	8.0			In	tersectior	n LOS: A						
Intersection Capacity Utiliz	zation 63.8%			IC	U Level o	of Service	В					
Analysis Period (min) 15												
Splits and Phases: 3. G	oehhert Roa	d & Alaon		ч								

Splits and Phases: 3: Goebbert Road & Algonquin Road

ø₂ (R) ⊎	₽ Ø4
125 s	25 s
≠ Ø5 • √ Ø6 (R)	1 ø8
14s 111s	25 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$		<u> </u>	ب ا ا	11	ľ	<u> </u>			4111	
Traffic Volume (vph)	2	0	0	197	1	508	0	1688	0	0	1589	1
Future Volume (vph)	2	0	0	197	1	508	0	1688	0	0	1589	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt						0.850						
Flt Protected		0.950		0.950	0.953							
Satd. Flow (prot)	0	1805	0	1681	1687	2814	1900	5406	0	0	6471	0
Flt Permitted				0.950	0.953							
Satd. Flow (perm)	0	1900	0	1681	1687	2814	1900	5406	0	0	6471	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	2	0	101	103	524	0	1740	0	0	1639	0
Turn Type	Perm	NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		32.0	32.0	32.0	16.0	102.0			86.0	
Total Split (%)	10.7%	10.7%		21.3%	21.3%	21.3%	10.7%	68.0%			57.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		37.7	37.7	37.7		97.4			97.4	
Actuated g/C Ratio		0.05		0.25	0.25	0.25		0.65			0.65	
v/c Ratio		0.02		0.24	0.24	0.74		0.50			0.39	
Control Delay		67.5		48.2	48.3	58.8		14.2			12.6	
Queue Delay		0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay		67.5		48.2	48.3	58.8		14.2			12.6	
LOS		E		D	D	E		В			В	
Approach Delay		67.5			55.9			14.2			12.6	
Approach LOS		E			E			В			В	
Queue Length 50th (ft)		2		82	83	264		298			168	
Queue Length 95th (ft)		11		154	157	#438		349			227	

23-086 - Mixed-Use Development - Arlington Heights Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings	
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp)

06/05/2023	
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300						
Base Capacity (vph)		126		422	424	707		3508			4200	
Starvation Cap Reductn		0		0	0	0		0			0	
Spillback Cap Reductn		0		0	0	0		0			0	
Storage Cap Reductn		0		0	0	0		0			0	
Reduced v/c Ratio		0.02		0.24	0.24	0.74		0.50			0.39	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 41 (27%), Reference	d to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 75												
Control Type: Actuated-Coo	rdinated											
Maximum v/c Ratio: 0.74												
	ntersection Signal Delay: 21.0 Intersection LOS: C											
Intersection Capacity Utiliza	tion 70.4%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
# 95th percentile volume e			eue may	be longer	ſ.							
Queue shown is maximu	m after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

🕇 Ø2 (R) 💗		₽ Ø8
102 s	16 s	32 s
▲ Ø5 🖕 🖡 Ø6 (R)		
16 s 86 s		

Intersection Capacity Utilization

MovementEBILane ConfigurationsVolume (vph)PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)00Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0.05Saturated Flow (vph)0.05Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Reference Time B (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Combined (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Reference Time (s)0.0Reference Time (s)	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.0 Yes 0.0 0.0	EBR 0 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0 0.0	WBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	WBT 0 1900 4.0 4.0 120 0 1.00 1.00 0.0 0.00 Ves 0.0 0.0 0.0	WBR 9 9 1900 4.0 4.0 120 9 1.00 0.85 1615 0.0 0.7 8.0	NBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	T NBT ↑↑↑ 2182 1900 4.0 4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0 55.0	NBR 14 14 No 1900 4.0 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0 0.0 0.0	SBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0	↓ SBT 1590 2000 4.0 4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	1900 4.0 4.0 120 498 1.00 0.85 1615 0.0
Lane ConfigurationsVolume (vph)0Pedestrians0Ped Button0Pedestrian Timing (s)1Free Right100Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.98Saturated Flow (vph)0Ped Intf Time (s)0.0Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0 1900 4.0 4.0 120 0 1.00 1.00 1.00 0.0 0.0 0.0 Yes 0.0 0.0	0 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0	0 1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	No 1900 4.0 4.0 120 9 1.00 0.85 1615 0.0 0.7	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	↑↑↓ 2182 1900 4.0 4.0 4.0 120 2196 0.91 1.00 5171 0.00 Yes 51.0	14 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	2000 4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	498 498 1900 4.0 4.0 120 498 1.00 0.85 1615 0.0
Volume (vph)(C)PedestriansPed ButtonPed ButtonPedestrian Timing (s)Free RightIdeal FlowIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0.00Ped Intf Time (s)0.00Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.0 Yes 0.0 0.0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.0 Ves 0.0	9 No 1900 4.0 4.0 120 9 1.00 0.85 1615 0.0 0.7	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2182 1900 4.0 4.0 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	1590 2000 4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	498 No 1900 4.0 4.0 4.0 4.0 4.0 4.0 0.85 1615 0.0
PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)00Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)00Ped Intf Time (s)0.00Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)00Reference Time A (s)0.0Adj Saturation B (vph)00Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.0 Yes 0.0 0.0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.0 Ves 0.0	No 1900 4.0 4.0 120 9 1.00 0.85 1615 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2182 1900 4.0 4.0 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	1590 2000 4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	No 1900 4.0 120 498 1.00 0.85 1615 0.0
Ped ButtonPedestrian Timing (s)Free RightIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)00Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)00Ped Intf Time (s)0.00Protected Option AllowedReference Time (s)Reference Time (s)0.00Permitted Option0.00Adj Saturation A (vph)00Reference Time A (s)0.00Reference Time B (s)0.00Reference Time (s)0.00Split Option0.00Ref Time Combined (s)0.00Ref Time Combined (s)0.00Ref Time Seperate (s)0.00	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	1900 4.0 120 9 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	1900 4.0 4.0 120 498 1.00 0.85 1615 0.0
Pedestrian Timing (s)Free RightIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.98Saturated Flow (vph)0Ped Intf Time (s)0.0Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Reference Time B (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time B (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	1900 4.0 120 9 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	1900 4.0 4.0 120 498 1.00 0.85 1615 0.0
Free RightIdeal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0Ped Intf Time (s)0.0Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Permitted Option0.0Adj Saturation A (vph)0Reference Time A (s)0.0Reference Time B (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	1900 4.0 120 9 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	4.0 120 498 1.00 0.85 1615 0.0
Ideal Flow1900Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)00Lane Utilization Factor1.00Turning Factor (vph)0.98Saturated Flow (vph)0.98Saturated Flow (vph)0.99Ped Intf Time (s)0.00Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)00Reference Time A (s)0.0Adj Saturation B (vph)00Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	1900 4.0 120 9 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	1900 4.0 4.0 120 498 1.00 0.85 1615 0.0
Lost Time (s)4.0Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)00Lane Utilization Factor1.00Turning Factor (vph)0.98Saturated Flow (vph)00Ped Intf Time (s)0.0Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)00Reference Time A (s)0.0Adj Saturation B (vph)00Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	4.0 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	4.0 4.0 120 9 1.00 0.85 1615 0.0 0.7	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	4.0 4.0 120 498 1.00 0.85 1615 0.0
Minimum Green (s)4.0Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0.95Saturated Flow (vph)0Ped Intf Time (s)0.0Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph)0Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	4.0 120 0 1.00 1.00 0 0.0 0.00 Yes 0.0 0.0	4.0 120 0 1.00 0.85 0 0.0	4.0 120 0 1.00 0.95 0 0.0	4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0	4.0 120 9 1.00 0.85 1615 0.0 0.7	4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	4.0 120 498 1.00 0.85 1615 0.0
Refr Cycle Length (s)120Volume Combined (vph)0Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0Ped Intf Time (s)0.0Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time A (s)0.0Adj Saturation B (vph)0Reference Time B (s)0.0Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	120 0 1.00 0.0 0.0 0.0 Yes 0.0 0.0	120 0 1.00 0.85 0 0.0	120 0 1.00 0.95 0 0.0	120 0 1.00 1.00 0 0.0 0.00 Yes 0.0	120 9 1.00 0.85 1615 0.0 0.7	120 0 1.00 0.95 0 0.0	120 2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	120 0 1.00 0.85 0 0.0	120 0 1.00 0.95 0 0.0	120 1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	4.0 120 498 1.00 0.85 1615 0.0 37.0
Volume Combined (vph)(CLane Utilization Factor1.00Turning Factor (vph)0.98Saturated Flow (vph)(CPed Intf Time (s)0.0Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Permitted Option0.0Adj Saturation A (vph)(CReference Time A (s)0.0Adj Saturation B (vph)(CReference Time B (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Ref Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0 1.00 0 0.0 0.00 Yes 0.0 0.0	0 1.00 0.85 0 0.0	0 1.00 0.95 0 0.0	0 1.00 1.00 0 0.0 0.00 Yes 0.0	9 1.00 0.85 1615 0.0	0 1.00 0.95 0 0.0	2196 0.91 1.00 5171 0.0 0.00 Yes 51.0	0 1.00 0.85 0 0.0	0 1.00 0.95 0 0.0	1590 0.91 1.00 7264 0.0 0.00 Yes 26.3	498 1.00 0.85 1615 0.0
Lane Utilization Factor1.00Turning Factor (vph)0.95Saturated Flow (vph)0.95Saturated Flow (vph)0.00Ped Intf Time (s)0.00Pedestrian Frequency (%)0.00Protected Option Allowed0.00Reference Time (s)0.00Adj Reference Time (s)0.00Adj Saturation A (vph)0.00Reference Time A (s)0.00Adj Saturation B (vph)0.00Reference Time B (s)0.00Reference Time (s)0.00Adj Reference Time (s)0.00Split Option0.00Ref Time Combined (s)0.00Ref Time Seperate (s)0.00	1.00 1.00 0 0.0 0.00 Yes 0.0 0.0	1.00 0.85 0 0.0	1.00 0.95 0 0.0	1.00 1.00 0 0.0 0.00 Yes 0.0	1.00 0.85 1615 0.0	1.00 0.95 0 0.0	0.91 1.00 5171 0.0 0.00 Yes 51.0	1.00 0.85 0 0.0	1.00 0.95 0 0.0	0.91 1.00 7264 0.0 0.00 Yes 26.3	1.00 0.85 1615 0.0
Turning Factor (vph)0.98Saturated Flow (vph)0Ped Intf Time (s)0.0Pedestrian Frequency (%)0Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph)0Reference Time B (s)0.0Reference Time (s)0.0Reference Time (s)0.0Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	1.00 0.0 0.00 Yes 0.0 0.0	0.85 0 0.0	0.95 0 0.0	1.00 0.0 0.00 Yes 0.0	0.85 1615 0.0 0.7	0.95 0 0.0	1.00 5171 0.0 0.00 Yes 51.0	0.85 0 0.0	0.95 0 0.0	1.00 7264 0.0 0.00 Yes 26.3	0.85 1615 0.0
Saturated Flow (vph)(0Ped Intf Time (s)0.0Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Adj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph)0Reference Time B (s)0.0Reference Time (s)0.0Reference Time B (s)0.0Reference Time (s)5Split OptionRef Time Combined (s)Ref Time Seperate (s)0.0	0 0.0 0.00 Yes 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0 0.0 0.00 Yes 0.0	1615 0.0 0.7	0 0.0 0.0	5171 0.0 0.00 Yes 51.0	0 0.0 0.0	0 0.0 0.0	7264 0.0 0.00 Yes 26.3	1615 0.0
Ped Intf Time (s) 0.0 Pedestrian Frequency (%) 0.0 Protected Option Allowed 0.0 Reference Time (s) 0.0 Adj Reference Time (s) 0.0 Permitted Option 0.0 Adj Saturation A (vph) 0 Reference Time A (s) 0.0 Adj Saturation B (vph) 0 Reference Time B (s) 0.0 Reference Time (s) 0.0 Reference Time (s) 5 Split Option 7 Ref Time Combined (s) 0.0 Ref Time Seperate (s) 0.0	0.0 0.00 Yes 0.0 0.0	0.0	0.0	0.0 0.00 Yes 0.0	0.0	0.0	0.0 0.00 Yes 51.0	0.0	0.0	0.0 0.00 Yes 26.3	0.0
Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Permitted OptionAdj Saturation A (vph)0Reference Time A (s)0.0Adj Saturation B (vph)0Reference Time B (s)0.0Reference Time (s)0.0Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0.00 Yes 0.0 0.0	0.0	0.0	0.00 Yes 0.0	0.7	0.0	0.00 Yes 51.0	0.0	0.0	0.00 Yes 26.3	
Protected Option AllowedReference Time (s)0.0Adj Reference Time (s)0.0Permitted Option0.0Adj Saturation A (vph)0.0Reference Time A (s)0.0Adj Saturation B (vph)0.0Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	Yes 0.0 0.0			Yes 0.0			Yes 51.0			Yes 26.3	37.0
Reference Time (s)0.0Adj Reference Time (s)0.0Permitted Option0.0Adj Saturation A (vph)0.0Adj Saturation B (vph)0.0Adj Saturation B (vph)0.0Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0.0 0.0			0.0			51.0			26.3	37.0
Adj Reference Time (s)0.0Permitted Option0.0Adj Saturation A (vph)0.0Reference Time A (s)0.0Adj Saturation B (vph)0.0Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0.0										37.0
Permitted Option Adj Saturation A (vph) Reference Time A (s) 0.0 Adj Saturation B (vph) C Reference Time B (s) 0.1 Reference Time B (s) Adj Reference Time (s) Split Option Ref Time Combined (s) 0.0 Ref Time Seperate (s)		0.0	0.0	0.0	8.0	0.0	55.0	0.0	0.0		01.0
Adj Saturation A (vph)(c)Reference Time A (s)0.0Adj Saturation B (vph)(c)Reference Time B (s)0.0Reference Time (s)(c)Adj Reference Time (s)(c)Split Option(c)Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	-							0.0	0.0	30.3	41.0
Reference Time A (s)0.0Adj Saturation B (vph0.0Reference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	~										
Adj Saturation B (vph(CReference Time B (s)0.0Reference Time (s)0.0Adj Reference Time (s)0.0Split Option0.0Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	0		0	0		0	1724		0	1816	
Reference Time B (s)0.0Reference Time (s)	0.0		0.0	0.0		0.0	51.0		0.0	26.3	
Reference Time (s) Adj Reference Time (s) Split Option Ref Time Combined (s) 0.0 Ref Time Seperate (s) 0.0	0		0	0		NA	NA		NA	NA	
Adj Reference Time (s)Split OptionRef Time Combined (s)0.0Ref Time Seperate (s)0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Split OptionRef Time Combined (s)0.0Ref Time Seperate (s)0.0	0.0			0.0			51.0			26.3	
Ref Time Combined (s)0.0Ref Time Seperate (s)0.0	8.0			8.0			55.0			30.3	
Ref Time Seperate (s) 0.0											
	0.0		0.0	0.0		0.0	51.0		0.0	26.3	
Reference Time (s) 0.0	0.0		0.0	0.0		0.0	50.6		0.0	26.3	
	0.0		0.0	0.0		51.0	51.0		26.3	26.3	
Adj Reference Time (s) 0.0	0.0		0.0	0.0		55.0	55.0		30.3	30.3	
Summary EB WE		NB SB	Co	mbined							
Protected Option (s) 0.0		55.0	0								
Permitted Option (s) 8.0		55.0									
Split Option (s) 0.0		85.2									
Minimum (s)		55.0		55.0							
Right Turns WBF	SBR										
Adj Reference Time (s) 8.0											
Cross Thru Ref Time (s) 55.0											
Oncoming Left Ref Time (s) 0.0											
Combined (s) 63.0											
Intersection Summary											

Reference Times and Phasing Options do not represent an optimized timing plan.

PMEX 23-086 - Mixed-Use Development - Arlington Heights 3:10 pm 07/20/2022 Existing Weekday Evening Peak Hour Synchro 11 Report sa/bsm Page 1

<u>Capacity Analysis Summary Sheets</u> Weekday Morning Peak Hour – No-Build Conditions

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

06/05/2023	06/	05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘኘ	<u></u>	1	ኘኘ	ተተተ	1	ሻሻ	ተተተ	1	ሻሻ	4111	
Traffic Volume (vph)	46	611	336	343	579	162	406	1034	374	128	1017	93
Future Volume (vph)	46	611	336	343	579	162	406	1034	374	128	1017	93
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230			250			300			280		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt			0.850			0.850			0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Flt Permitted	0.950	0200		0.950			0.950			0.950		
Satd. Flow (perm)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Right Turn on Red	5001	0200	No			No		0001	No	0100		No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	5%	4%	6%	8%	12%	5%	3%	8%	10%	2%	1%
Shared Lane Traffic (%)	170	0,0	170	0,0	0,0	1270	0,0	070	0,0	1070	270	170
Lane Group Flow (vph)	47	623	343	350	591	165	414	1055	382	131	1133	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	U
Protected Phases	7	4	5	3	8	pin: 01	5	2	3	1	6	
Permitted Phases			4	Ū	Ū	8	Ŭ	-	2	•	Ū	
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase	•	•	•	Ū	Ŭ	•	Ū	_	Ū	•	Ŭ	
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	17.0	38.0	31.0	36.0	57.0	18.0	31.0	58.0	36.0	18.0	45.0	
Total Split (%)	11.3%	25.3%	20.7%	24.0%	38.0%	12.0%	20.7%	38.7%	24.0%	12.0%	30.0%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	7.5	33.0	62.5	21.9	49.3	66.6	23.5	62.9	90.8	11.2	50.7	
Actuated g/C Ratio	0.05	0.22	0.42	0.15	0.33	0.44	0.16	0.42	0.61	0.07	0.34	
v/c Ratio	0.28	0.55	0.53	0.73	0.36	0.26	0.79	0.47	0.42	0.55	0.53	
Control Delay	72.3	53.4	35.3	65.4	32.7	22.6	79.1	24.0	13.5	75.5	43.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.3	53.4	35.3	65.4	32.7	22.6	79.1	24.0	13.5	75.5	43.0	
LOS	E	D	D	E	C	C	E	C	B	E	D	
Approach Delay	_	48.1		_	41.6	<u> </u>	_	34.2			46.4	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	23	197	241	174	175	116	215	215	160	64	268	
Queue Length 95th (ft)	45	239	328	174	131	89	m251	242	m188	100	334	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

06/05/2023	
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	280	1190	678	693	1758	661	591	2224	1001	286	2137	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.52	0.51	0.51	0.34	0.25	0.70	0.47	0.38	0.46	0.53	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150)											
Offset: 58 (39%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 80												
Control Type: Actuated-Coo	ordinated											
Maximum v/c Ratio: 0.79												
Intersection Signal Delay: 4	1.4			In	tersectior	n LOS: D						
Intersection Capacity Utilization	ation 67.7%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
m Volume for 95th percer	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 1: Arl	ington Heigl	nts Road	& Algonq	uin Road								

Ø1	Ø2 (R)	1 03	₩ Ø4
18 s	58 s	36 s	38 s
A Ø5	🛛 🕇 🖉 Ø6 (R)		▲ Ø8
31 s	45 s	17 s	57 s

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	<u>۲</u>	<u>ተ</u> ተጮ		٦	ተተኈ		٦	el 🗧		٦	eî 👘	
Traffic Volume (vph)	100	993	21	7	927	16	3	1	4	17	1	172
Future Volume (vph)	100	993	21	7	927	16	3	1	4	17	1	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.998			0.880			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4840	0	1805	4751	0	1805	1393	0	1703	1601	0
Flt Permitted	0.243			0.247			0.397			0.754		
Satd. Flow (perm)	448	4840	0	469	4751	0	754	1393	0	1352	1601	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	7%	0%	0%	9%	7%	0%	0%	25%	6%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	1102	0	8	1025	0	3	5	0	18	188	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	24.0	102.0		13.0	91.0		35.0	35.0		35.0	35.0	
Total Split (%)	16.0%	68.0%		8.7%	60.7%		23.3%	23.3%		23.3%	23.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	117.3	112.9		111.7	103.5		23.2	23.2		23.2	23.2	
Actuated g/C Ratio	0.78	0.75		0.74	0.69		0.15	0.15		0.15	0.15	
v/c Ratio	0.26	0.30		0.02	0.31		0.03	0.02		0.09	0.76	
Control Delay	6.1	5.4		4.6	9.8		51.0	50.6		52.6	79.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.1	5.4		4.6	9.8		51.0	50.6		52.6	79.8	
LOS	A	A		A	A		D	D		D	E	
Approach Delay		5.5			9.8		-	50.8		_	77.5	
Approach LOS		A			A			D			E	
Queue Length 50th (ft)	20	99		0	161		3	4		15	178	
Queue Length 95th (ft)	38	133		m4	116		12	17		39	257	
											_0,	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	528	3643		445	3279		145	269		261	309	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.30		0.02	0.31		0.02	0.02		0.07	0.61	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	50											
Offset: 115 (77%), Refere	nced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.76												
Intersection Signal Delay:	13.5			In	tersectior	n LOS: B						
Intersection Capacity Utiliz	zation 47.8%			IC	CU Level of	of Service	А					
Analysis Period (min) 15												
m Volume for 95th perce	entile queue i	s metered	l by upstr	eam sign	ial.							
Splits and Phases: 2: T	onne Road &	Alaonaui	n Road									
									1	04		

Ø1	¥ø2 (≹)	M ₁₀₄
13 s	102 s	35 s
_ # Ø5	∎ ≸ Ø6 (R)	* Ø8
24 s	91s	35 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/2023	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	A1⊅		<u>ک</u>	≜ î≽			\$		ľ	et	
Traffic Volume (vph)	27	891	5	1	853	26	3	0	0	55	2	52
Future Volume (vph)	27	891	5	1	853	26	3	0	0	55	2	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	165		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	130			100			25			80		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.996						0.855	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1671	3372	0	1805	3274	0	0	1805	0	1736	1536	0
Flt Permitted	0.283			0.300				0.720		0.756		
Satd. Flow (perm)	498	3372	0	570	3274	0	0	1368	0	1381	1536	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1142			483			222			765	
Travel Time (s)		17.3			7.3			6.1			20.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	7%	0%	0%	10%	4%	0%	0%	0%	4%	0%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	953	0	1	935	0	0	3	0	59	57	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		24.0	24.0		18.0	18.0		18.0	18.0	
Total Split (s)	14.0	132.0		118.0	118.0		18.0	18.0		18.0	18.0	
Total Split (%)	9.3%	88.0%		78.7%	78.7%		12.0%	12.0%		12.0%	12.0%	
Yellow Time (s)	3.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		6.0	6.0			6.0		6.0	6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)	128.9	126.4		120.6	120.6			11.6		11.6	11.6	
Actuated g/C Ratio	0.86	0.84		0.80	0.80			0.08		0.08	0.08	
v/c Ratio	0.06	0.34		0.00	0.36			0.03		0.56	0.48	
Control Delay	1.6	3.9		4.0	4.9			63.7		85.9	79.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	1.6	3.9		4.0	4.9			63.7		85.9	79.5	
LOS	А	А		Α	А			E		F	E	
Approach Delay		3.8			4.9			63.7			82.8	
Approach LOS		А			А			E			F	
Queue Length 50th (ft)	1	254		0	133			3		56	54	
Queue Length 95th (ft)	7	72		2	160			14		109	104	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	510	2856		458	2633			115		116	129	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.06	0.33		0.00	0.36			0.03		0.51	0.44	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	0											
Offset: 94 (63%), Reference	ced to phase	2:EBTL a	and 6:WB	TL, Start	of Green							
Natural Cycle: 55												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.56												
Intersection Signal Delay:	8.9			In	tersectior	n LOS: A						
Intersection Capacity Utiliz	ation 41.5%			IC	CU Level o	of Service	A					
Analysis Period (min) 15												
Splits and Dhasas: 2: C	oobbort Doo		auin Dee	4								

Splits and Phases: 3: Goebbert Road & Algonquin Road

ø₂ (R)₩	₽ Ø4
132 s	18 s
≠ Ø5 ♥ ▼ Ø6 (R)	↑ Ø8
14s 118s	18 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$		<u>ک</u>	र्स	77	<u>۲</u>	<u> </u>			4111	
Traffic Volume (vph)	0	0	4	272	Ö	529	3	1283	0	0	1310	3
Future Volume (vph)	0	0	4	272	0	529	3	1283	0	0	1310	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt		0.865				0.850						
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Flt Permitted				0.950	0.950		0.950					
Satd. Flow (perm)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	50%	1%	0%	3%	0%	6%	0%	0%	2%	67%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	4	0	148	148	575	3	1395	0	0	1427	0
Turn Type		NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		40.0	40.0	40.0	16.0	94.0			78.0	
Total Split (%)	10.7%	10.7%		26.7%	26.7%	26.7%	10.7%	62.7%			52.0%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		37.7	37.7	37.7	5.9	97.3			95.1	
Actuated g/C Ratio		0.05		0.25	0.25	0.25	0.04	0.65			0.63	
v/c Ratio		0.07		0.35	0.35	0.83	0.04	0.42			0.35	
Control Delay		69.8		48.4	48.4	63.9	70.3	13.8			8.1	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		69.8		48.4	48.4	63.9	70.3	13.8			8.1	
LOS		E		D	D	E	E	В			А	
Approach Delay		69.8			58.6			13.9			8.1	
Approach LOS		E			E			В			А	
Queue Length 50th (ft)		4		122	122	295	3	227			87	
Queue Length 95th (ft)		17		202	202	#422	15	308			128	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

06/05/2023	06/	05/	20	23
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300	155					
Base Capacity (vph)		73		431	431	702	138	3342			4057	
Starvation Cap Reductn		0		0	0	0	0	0			0	
Spillback Cap Reductn		0		0	0	0	0	0			0	
Storage Cap Reductn		0		0	0	0	0	0			0	
Reduced v/c Ratio		0.05		0.34	0.34	0.82	0.02	0.42			0.35	
Intersection Summary												
Area Type: O	ther											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 61 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coord	dinated											
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 22.	2.2 Intersection LOS: C											
Intersection Capacity Utilization	on 63.7% ICU Level of Service B											
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum	after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

🕇 Ø2 (R) 🕊		₽ Ø8	
94s	16 s	40 s	
◆ Ø5 🖡 🖡 Ø6 (R)			
16 s 78 s			

Intersection Capacity Utilization

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Novement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBI
ane Configurations						1		朴朴			1111	i
/olume (vph)	0	0	0	0	0	2	0	1812	12	0	1313	38
Pedestrians	•	•	•	•	•	_	•			•		
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			N
deal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	190
ost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.
<i>I</i> inimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	12
/olume Combined (vph)	0	0	0	0	0	2	0	1824	0	0	1313	38
ane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.0
Furning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.8
Saturated Flow (vph)	0.35	0	0.00	0.35	0	1615	0.35	5170	0.00	0.55	7264	161
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Pedestrian Frequency (%)	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0.0	0.0	0.00	0
1 2 1 /		Yes			Yes			Yes			Yes	
Protected Option Allowed	0.0	0.0	0.0	0.0	0.0	0.1	0.0	42.3	0.0	0.0	21.7	28
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	0.1 8.0	0.0	42.3	0.0	0.0	21.7	20 32
Adj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.5	0.0	0.0	23.1	JZ.
Permitted Option	0	0		0	0		0	1700		0	1010	
Adj Saturation A (vph)	0	0		0	0		0	1723		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	42.3		0.0	21.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA 40.2		NA	NA	
Reference Time (s)		0.0			0.0			42.3			21.7	
Adj Reference Time (s)		8.0			8.0			46.3			25.7	
Split Option		• •			• •		• •	10.0		• •	o / =	
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	42.3		0.0	21.7	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	42.1		0.0	21.7	
Reference Time (s)	0.0	0.0		0.0	0.0		42.3	42.3		21.7	21.7	
Adj Reference Time (s)	0.0	0.0		0.0	0.0		46.3	46.3		25.7	25.7	
Summary	EB WB		NB SB	Co	mbined							
Protected Option (s)	0.0		46.3									
Permitted Option (s)	8.0		46.3									
Split Option (s)	0.0		72.0									
Ainimum (s)	0.0		46.3		46.3							
Right Turns	WBR	SBR										
Adj Reference Time (s)	8.0	32.5										
Cross Thru Ref Time (s)	46.3	0.0										
Discoming Left Ref Time (s)	0.0	0.0										
Combined (s)	54.3	32.5										
ntersection Summary												

Reference Times and Phasing Options do not represent an optimized timing plan.

AMNB 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 No-Build Weekday Morning Peak HouSynchro 11 Report Page 1 <u>Capacity Analysis Summary Sheets</u> Weekday Evening Peak Hour – No-Build Conditions

06/05/2023	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘካ	^	1	ኘኘ	^	1	ሻሻ	^	1	ካካ	4111	
Traffic Volume (vph)	90	788	467	456	851	224	506	1312	471	201	1261	99
Future Volume (vph)	90	788	467	456	851	224	506	1312	471	201	1261	99
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230		•	250		•	300		•	280		·
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt	••••		0.850		0.0.	0.850	0.01		0.850	0.01	0.989	0.00
Flt Protected	0.950		0.000	0.950			0.950		0.000	0.950		
Satd. Flow (prot)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Flt Permitted	0.950	•.•.		0.950			0.950	0.00		0.950		
Satd. Flow (perm)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Right Turn on Red		0.01	No	2.00		No	5.01	2.00	No	5001	5.50	No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	0%	2%	2%	1%	1%	1%	3%	4%	1%	1%
Shared Lane Traffic (%)	- / -	- / -			_,,		.,.	.,.		.,.	.,.	
Lane Group Flow (vph)	95	829	492	480	896	236	533	1381	496	212	1431	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	15.0	42.0	33.0	31.0	58.0	20.0	33.0	57.0	31.0	20.0	44.0	
Total Split (%)	10.0%	28.0%	22.0%	20.7%	38.7%	13.3%	22.0%	38.0%	20.7%	13.3%	29.3%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	9.1	36.4	69.5	25.1	52.3	72.2	27.1	53.6	84.7	13.9	40.5	
Actuated g/C Ratio	0.06	0.24	0.46	0.17	0.35	0.48	0.18	0.36	0.56	0.09	0.27	
v/c Ratio	0.45	0.66	0.66	0.84	0.48	0.31	0.85	0.71	0.56	0.68	0.83	
Control Delay	74.4	54.3	36.0	95.1	30.4	19.1	57.8	39.7	27.8	77.2	56.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	
Total Delay	74.4	54.3	36.0	95.1	30.4	19.1	57.8	39.7	28.4	77.2	56.9	
LOS	E	D	D	F	С	В	E	D	С	E	E	
Approach Delay		49.3			48.0			41.3			59.5	
Approach LOS		D			D			D			E	
Queue Length 50th (ft)	46	271	361	257	173	96	233	460	375	104	394	
Queue Length 95th (ft)	78	321	492	317	197	m129	302	519	538	149	442	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Evening Peak Hour Synchro 11 Report

06/05/2023	
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	245	1250	763	606	1878	787	658	1932	900	347	1726	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	134	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.66	0.64	0.79	0.48	0.30	0.81	0.71	0.65	0.61	0.83	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	0											
Offset: 77 (51%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	Start of 0	Green							
Natural Cycle: 90												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.85												
Intersection Signal Delay:	48.7			In	tersectior	n LOS: D						
Intersection Capacity Utiliz	ation 79.3%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
m Volume for 95th perce	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 1: Ar	lington Heigl	nts Road	& Algonq	uin Road		4						

Ø1	Ø2 (R)	боз		₩ 04	
20 s	57 s	31 s		42 s	
\$ Ø5	📕 🖡 Ø6 (R)	<u>∕</u> ≉ _{Ø7}	4 [♠] Ø8		
33 s	44 s	15 s	58 s		

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	<u>۲</u>	<u>ተተ</u> ኑ		۲.	ተተጮ		7	eî 👘		<u>ک</u>	eî 👘	
Traffic Volume (vph)	183	1270	7	6	1305	25	30	6	5	31	0	173
Future Volume (vph)	183	1270	7	6	1305	25	30	6	5	31	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.997			0.932			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4936	0	1805	5072	0	1805	1623	0	1752	1599	0
Flt Permitted	0.152			0.188			0.370			0.750		
Satd. Flow (perm)	289	4936	0	357	5072	0	703	1623	0	1383	1599	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
Shared Lane Traffic (%)	070	070	070	070	270	070	070	070	2070	070	070	170
Lane Group Flow (vph)	195	1358	0	6	1415	0	32	11	0	33	184	0
Turn Type	pm+pt	NA	U	pm+pt	NA	U	Perm	NA	0	Perm	NA	U
Protected Phases	5	2		pm-pt 1	6		T CITI	8		T CITI	4	
Permitted Phases	2	-		6	v		8	Ū		4	•	
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase	Ū	-		•	•		•	Ŭ		•	•	
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	14.0	108.0		14.0	108.0		28.0	28.0		28.0	28.0	
Total Split (%)	9.3%	72.0%		9.3%	72.0%		18.7%	18.7%		18.7%	18.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		0.0	0.0		0.0	0.0	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	119.9	115.5		112.9	104.8		20.6	20.6		20.6	20.6	
Actuated g/C Ratio	0.80	0.77		0.75	0.70		0.14	0.14		0.14	0.14	
v/c Ratio	0.61	0.36		0.02	0.40		0.33	0.05		0.17	0.84	
Control Delay	24.9	4.1		2.0	5.8		67.9	55.8		58.8	92.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.9	4.1		2.0	5.8		67.9	55.8		58.8	92.8	
LOS	C	A		2.0 A	A		67.5 E	E		E	52.0 F	
Approach Delay	J	6.7		, ,	5.8		_	64.8		_	87.7	
Approach LOS		0.7 A			0.0 A			04.0 E			57.7 F	
Queue Length 50th (ft)	50	82		0	116		28	9		29	176	
Queue Length 95th (ft)	110	127		m1	61		66	29		63	#298	
	110	121			51		50	20		50		

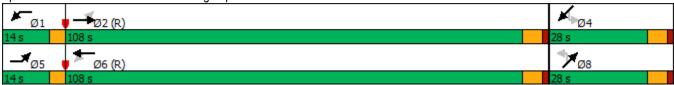
23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Evening Peak Hour Synchro 11 Report

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	337	3800		381	3542		103	238		202	234	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.36		0.02	0.40		0.31	0.05		0.16	0.79	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	0											
Offset: 140 (93%), Referer	nced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.84												
Intersection Signal Delay:				In	tersectior	n LOS: B						
Intersection Capacity Utiliz	ation 71.6%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
# 95th percentile volume			eue may	be longer	r.							
Queue shown is maxim												
m Volume for 95th perce	ntile queue i	s metered	l by upstr	eam sign	al.							
			_ .									

Splits and Phases: 2: Tonne Road & Algonquin Road



Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/202	3
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>۲</u>	<u></u> ≜†î∌		۲	A			\$		٦	¢Î	
Traffic Volume (vph)	59	1134	5	2	1236	83	6	1	1	57	3	46
Future Volume (vph)	59	1134	5	2	1236	83	6	1	1	57	3	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110		0	165		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	130			100			25			80		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.991			0.983			0.859	
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	1805	3435	0	1805	3510	0	0	1600	0	1805	1632	0
Flt Permitted	0.167			0.238				0.785		0.752		-
Satd. Flow (perm)	317	3435	0	452	3510	0	0	1303	0	1429	1632	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1142			483			222			765	
Travel Time (s)		17.3			7.3			6.1			20.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	5%	0%	0%	2%	1%	0%	100%	0%	0%	0%	0%
Shared Lane Traffic (%)	0,0	0,0	0,0	0,0	270	170	0,0	10070	0,0	0,0	0,0	0,0
Lane Group Flow (vph)	61	1186	0	2	1374	0	0	8	0	59	51	0
Turn Type	pm+pt	NA		Perm	NA	· ·	Perm	NĂ	•	Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		24.0	24.0		18.0	18.0		18.0	18.0	
Total Split (s)	14.0	125.0		111.0	111.0		25.0	25.0		25.0	25.0	
Total Split (%)	9.3%	83.3%		74.0%	74.0%		16.7%	16.7%		16.7%	16.7%	
Yellow Time (s)	3.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		6.0	6.0			6.0		6.0	6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)	130.7	129.4		121.5	121.5			12.6		12.6	12.6	
Actuated g/C Ratio	0.87	0.86		0.81	0.81			0.08		0.08	0.08	
v/c Ratio	0.18	0.40		0.01	0.48			0.07		0.50	0.38	
Control Delay	3.1	3.5		5.0	6.8			62.4		78.7	71.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	3.1	3.5		5.0	6.8			62.4		78.7	71.6	
LOS	А	А		А	А			Е		E	E	
Approach Delay		3.4			6.8			62.4			75.4	
Approach LOS		А			А			E			E	
Queue Length 50th (ft)	8	88		0	232			7		56	48	
Queue Length 95th (ft)	16	124		3	329			25		104	92	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Evening Peak Hour Synchro 11 Report

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	380	2964		366	2842			165		181	206	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.16	0.40		0.01	0.48			0.05		0.33	0.25	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	i0											
Offset: 120 (80%), Referen	nced to phas	e 2:EBTL	and 6:WI	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.50												
Intersection Signal Delay:				In	tersectior	n LOS: A						
Intersection Capacity Utiliz	ation 65.7%			IC	CU Level o	of Service	С					
Analysis Period (min) 15												
Splite and Phases: 3: G	oebbert Roa	d & Alaon	auin Roa	Ч								

Splits and Phases: 3: Goebbert Road & Algonquin Road

ø₂ (R) ⊎	₽ Ø4
125 s	25 s
≠ Ø5 • √ Ø6 (R)	1 ø8
14s 111s	25 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

06/05/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		5	र्भ	11	5	^			411176	
Traffic Volume (vph)	2	0	0	205	1	528	0	1767	0	0	1665	1
Future Volume (vph)	2	0	0	205	1	528	0	1767	0	0	1665	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt						0.850						
Flt Protected		0.950		0.950	0.953							
Satd. Flow (prot)	0	1805	0	1681	1687	2814	1900	5406	0	0	6471	0
Flt Permitted				0.950	0.953							
Satd. Flow (perm)	0	1900	0	1681	1687	2814	1900	5406	0	0	6471	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	2	0	105	107	544	0	1822	0	0	1717	0
Turn Type	Perm	NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		32.0	32.0	32.0	16.0	102.0			86.0	
Total Split (%)	10.7%	10.7%		21.3%	21.3%	21.3%	10.7%	68.0%			57.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		39.1	39.1	39.1		96.0			96.0	
Actuated g/C Ratio		0.05		0.26	0.26	0.26		0.64			0.64	
v/c Ratio		0.02		0.24	0.24	0.74		0.53			0.41	
Control Delay		67.5		47.3	47.4	57.8		15.3			13.8	
Queue Delay		0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay		67.5		47.3	47.4	57.8		15.3			13.8	
LOS		E		D	D	E		В			В	
Approach Delay		67.5			54.8			15.3			13.8	
Approach LOS		E			D			В			В	
Queue Length 50th (ft)		2		83	85	271		335			197	
Queue Length 95th (ft)		11		160	162	#463		372			240	

23-086 - Mixed-Use Development - Arlington Heights No-Build Weekday Evening Peak Hour Synchro 11 Report

Lanes, Volumes, Timings	
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp)

06/05/2023	
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300						
Base Capacity (vph)		126		437	439	732		3459			4141	
Starvation Cap Reductn		0		0	0	0		0			0	
Spillback Cap Reductn		0		0	0	0		0			0	
Storage Cap Reductn		0		0	0	0		0			0	
Reduced v/c Ratio		0.02		0.24	0.24	0.74		0.53			0.41	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15												
Offset: 41 (27%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 75												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.74												
Intersection Signal Delay: 2					tersectior							
Intersection Capacity Utiliz	ation 72.6%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
# 95th percentile volume			eue may	be longer	ſ.							
Queue shown is maxim	um after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

🕇 Ø2 (R) 💗		₽ Ø8
102 s	16 s	32 s
◆ Ø5 🖡 🖡 Ø6 (R)		
16 s 86 s		

Intersection Capacity Utilization

	۶	-	\mathbf{i}	•	-	*	•	t	*	1	Ļ	~
Novement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SB
ane Configurations						1		朴朴			1111	
/olume (vph)	0	0	0	0	0	9	0	2280	15	0	1666	5′
Pedestrians	-	-	-	-	-		-			-		
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			١
deal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	19
.ost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4
/inimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	1
/olume Combined (vph)	0	0	0	0	0	9	0	2295	0	0	1666	5
ane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.(
urning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.
Saturated Flow (vph)	0	0	0	0	0	1615	0	5171	0	0	7264	16
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	0.7	0.0	53.3	0.0	0.0	27.5	38
dj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	8.0	0.0	57.3	0.0	0.0	31.5	42
Permitted Option												
dj Saturation A (vph)	0	0		0	0		0	1724		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	53.3		0.0	27.5	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			0.0			53.3			27.5	
dj Reference Time (s)		8.0			8.0			57.3			31.5	
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	53.3		0.0	27.5	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	52.9		0.0	27.5	
Reference Time (s)	0.0	0.0		0.0	0.0		53.3	53.3		27.5	27.5	
di Reference Time (s)	0.0	0.0		0.0	0.0		57.3	57.3		31.5	31.5	
;												
Summary	EB WB		NB SB	Co	mbined							
Protected Option (s)	0.0		57.3									
Permitted Option (s)	8.0		57.3									
Split Option (s)	0.0		88.8									
linimum (s)	0.0		57.3		57.3							
Right Turns	WBR	SBR										
dj Reference Time (s)	8.0	42.5										
Cross Thru Ref Time (s)	57.3	0.0										
Discoming Left Ref Time (s)	0.0	0.0										
Combined (s)	65.3	42.5										
	- • • •											

Reference Times and Phasing Options do not represent an optimized timing plan.

PMNB 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 No-Build Weekday Evening Peak HouSynchro 11 Report Page 1 <u>Capacity Analysis Summary Sheets</u> Weekday Morning Peak Hour – Phase I Conditions

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘካ	^	1	ካካ	^	1	ሻሻ	^	1	ካካ	4111	
Traffic Volume (vph)	46	622	336	388	587	162	420	1056	374	139	1017	93
Future Volume (vph)	46	622	336	388	587	162	420	1056	374	139	1017	93
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230			250		•	300			280		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt			0.850			0.850			0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Flt Permitted	0.950	0200		0.950			0.950			0.950		
Satd. Flow (perm)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Right Turn on Red	0001	0200	No	0000	0000	No		0001	No	0100	0000	No
Satd. Flow (RTOR)						110						
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	5%	4%	6%	8%	12%	5%	3%	8%	10%	2%	1%
Shared Lane Traffic (%)	170	0,0	170	0,0	0,0	1270	070	0,0	0,0	1070	270	170
Lane Group Flow (vph)	47	635	343	396	599	165	429	1078	382	142	1133	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Ŭ
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	17.0	38.0	31.0	36.0	57.0	18.0	31.0	58.0	36.0	18.0	45.0	
Total Split (%)	11.3%	25.3%	20.7%	24.0%	38.0%	12.0%	20.7%	38.7%	24.0%	12.0%	30.0%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	7.5	32.7	62.6	24.0	51.3	68.9	23.8	60.6	90.7	11.6	48.4	
Actuated g/C Ratio	0.05	0.22	0.42	0.16	0.34	0.46	0.16	0.40	0.60	0.08	0.32	
v/c Ratio	0.28	0.56	0.53	0.75	0.35	0.25	0.81	0.50	0.42	0.58	0.55	
Control Delay	72.3	54.1	35.4	62.4	33.4	24.1	80.3	26.3	14.0	76.2	44.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.3	54.1	35.4	62.4	33.4	24.1	80.3	26.3	14.0	76.2	44.8	
LOS	E	D	D	E	С	С	F	С	В	E	D	
Approach Delay		48.7			42.0			36.1			48.3	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	23	201	238	198	178	118	223	226	160	70	276	
Queue Length 95th (ft)	45	248	337	188	145	104	m261	256	m188	107	334	

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 1

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	280	1172	675	693	1771	680	589	2142	978	286	2042	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.54	0.51	0.57	0.34	0.24	0.73	0.50	0.39	0.50	0.55	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15												
Offset: 58 (39%), Reference	ced to phase	2:NBT ar	nd 6:SBT,	, Start of	Green							
Natural Cycle: 80												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.81												
	Intersection Signal Delay: 42.7 Inter					n LOS: D						
Intersection Capacity Utilization 69.3% ICU					U Level o	of Service	С					
Analysis Period (min) 15												
m Volume for 95th perce	entile queue i	s metered	d by upstr	eam sign	al.							
Splits and Phases: 1: A	rlington Heigl	nts Road	& Alaona	uin Road								
		10 1 1000	a rugonq			-						

Ø1	Ø2 (R)	1 03	₩ Ø4
18 s	58 s	36 s	38 s
A Ø5	🛛 🕇 🖉 Ø6 (R)		▲ Ø8
31 s	45 s	17 s	57 s

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	<u>۲</u>	<u>ተተኑ</u>		<u>۲</u>	ተተኈ		7	eî		ľ	eî	
Traffic Volume (vph)	100	1002	32	19	927	16	56	1	18	17	1	172
Future Volume (vph)	100	1002	32	19	927	16	56	1	18	17	1	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.998			0.857			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4833	0	1805	4751	0	1805	1315	0	1703	1601	0
Flt Permitted	0.243			0.235			0.397			0.744		
Satd. Flow (perm)	448	4833	0	446	4751	0	754	1315	0	1334	1601	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)									-			
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	7%	0%	0%	9%	7%	0%	0%	25%	6%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	1124	0	21	1025	0	61	21	0	18	188	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	24.0	102.0		13.0	91.0		35.0	35.0		35.0	35.0	
Total Split (%)	16.0%	68.0%		8.7%	60.7%		23.3%	23.3%		23.3%	23.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	116.7	109.0		111.9	103.5		23.2	23.2		23.2	23.2	
Actuated g/C Ratio	0.78	0.73		0.75	0.69		0.15	0.15		0.15	0.15	
v/c Ratio	0.26	0.32		0.05	0.31		0.53	0.10		0.09	0.76	
Control Delay	5.8	6.5		4.3	9.6		73.5	53.1		52.7	79.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.8	6.5		4.3	9.6		73.5	53.1		52.7	79.8	
LOS	Α	А		А	А		E	D		D	E	
Approach Delay		6.4			9.5			68.3			77.5	
Approach LOS		А			А			E			E	
Queue Length 50th (ft)	20	142		1	166		55	18		15	178	
Queue Length 95th (ft)	36	131		m10	116		105	43		39	257	

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 3

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	528	3513		429	3279		145	254		257	309	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.32		0.05	0.31		0.42	0.08		0.07	0.61	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 115 (77%), Reference	ced to phase	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Coc	ordinated											
Maximum v/c Ratio: 0.76												
Intersection Signal Delay: 15.4 Intersection LOS: B												
Intersection Capacity Utilization 59.5% ICU Level of Service B												
Analysis Period (min) 15												
m Volume for 95th percen	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 2: Tor	nne Road &	Alaonaui	n Road									
		,								34		

Ø1	<u>→</u> ø2 (8 .)	× ₀₄
13 s	102 s	35 s
_ # Ø5	●Ø6 (R)	*≠ø8
24 s	91s	35 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SB Lane Configurations 1 <	
Traffic Volume (vph) 27 905 5 1 865 26 3 0 0 55 2 55 Ideal Flow (vphpl) 1900	Lane Group
Traffic Volume (vph) 27 905 5 1 865 26 3 0 0 55 2 55 Ideal Flow (vphpl) 1900	Lane Configurations
Ideal Flow (vphpl) 1900 100 100 100	Traffic Volume (vph)
Ideal Flow (vphpl) 1900 100 100 100	Future Volume (vph)
Storage Length (ft) 110 0 165 0 0 0 100 Storage Lanes 1 0 1 0 0 0 0 100 Taper Length (ft) 130 100 25 80 1.00	(,,,,
Storage Lanes 1 0 1 0 0 0 1 Taper Length (ft) 130 100 25 80 Image Length (ft) 1.00	(, , , ,
Taper Length (ft) 130 100 25 80 Lane Util. Factor 1.00 0.95 0.95 1.00 0.95 0.95 1.00	
Lane Util. Factor 1.00 0.95 0.95 1.00 0.95 0.95 1.00 <th1.00< th=""> 1.00 1.00</th1.00<>	
Frt 0.999 0.996 0.855 Fit Protected 0.950 0.950 0.950 0.950 Satd. Flow (prot) 1671 3372 0 1805 3274 0 0 1805 0 1736 1536 Fit Permitted 0.279 0.296 0.720 0.756 1.756 1.757 1.757 1.757 1.757 1.757 1.757 <td></td>	
Fit Protected 0.950 0.950 0.950 0.950 0.950 Satd. Flow (prot) 1671 3372 0 1805 3274 0 0 1805 0 1736 1536 Fit Permitted 0.279 0.296 0.720 0.756 0.720 0.756 Satd. Flow (perm) 491 3372 0 562 3274 0 0 1368 0 1381 1536 Right Turn on Red No So So So	Frt
Satd. Flow (prot) 1671 3372 0 1805 3274 0 0 1805 0 1736 1536 Fit Permitted 0.279 0.296 0.720 0.756 0.756 0.720 0.756 Satd. Flow (perm) 491 3372 0 562 3274 0 0 1368 0 1381 1536 Right Turn on Red No Na Pares A A A A A A A A A <	
Fit Permitted 0.279 0.296 0.720 0.756 Satd. Flow (perm) 491 3372 0 562 3274 0 0 1368 0 1381 1536 Right Turn on Red No No No No No No No Link Speed (mph) 45 45 25 25 1000 1000 1000 1000 1000 No N	
Satd. Flow (perm) 491 3372 0 562 3274 0 0 1368 0 1381 1536 Right Turn on Red No No No No No No No No Satd. Flow (RTOR) 1142 483 222 765 25 25 25 Link Distance (ft) 1142 483 222 765 20.9 20.9 Peak Hour Factor 0.94	(i)
Right Turn on Red No No No No Satd. Flow (RTOR) Link Speed (mph) 45 45 25 25 Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94 0	
Said. Flow (RTOR) Link Speed (mph) 45 45 25 25 Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94	
Link Speed (mph) 45 45 25 25 Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94 0.95 9.95 76 76 <t< td=""><td></td></t<>	
Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94	()
Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94	
Peak Hour Factor 0.94	()
Heavy Vehicles (%) 8% 7% 0% 0% 10% 4% 0% 0% 4% 0% 6% Shared Lane Traffic (%) 29 968 0 1 948 0 0 3 0 59 57 Lane Group Flow (vph) 29 968 0 1 948 0 0 3 0 59 57 Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 4 Permitted Phases 2 6 6 8 4 4 Detector Phase 5 2 6 6 8 4 4 Switch Phase 3.0 15.0 15.0 15.0 8.0 8.0 8.0 Minimum Initial (s) 3.0 15.0 24.0 24.0 18.0 18.0 18.0	
Shared Lane Traffic (%) Lane Group Flow (vph) 29 968 0 1 948 0 0 3 0 59 57 Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 4 Permitted Phases 2 6 6 8 4 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase 5 2 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Initial (s) 3.0 15.0 15.0 18.0 18.0 18.0 18.0	
Lane Group Flow (vph) 29 968 0 1 948 0 0 3 0 59 57 Turn Type pm+pt NA Perm Perm NA Perm NA Perm Perm NA Perm NA Perm NA Perm NA Perm NA <	
Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 4 Permitted Phases 2 6 8 4 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase 5 2 6 6 8 8 4 4 Switch Phase 5 2 6 6 8.0	()
Protected Phases 5 2 6 8 4 Permitted Phases 2 6 8 4 Detector Phase 5 2 6 6 8 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase	
Permitted Phases 2 6 8 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase -	
Detector Phase 5 2 6 6 8 8 4 4 Switch Phase	
Switch PhaseMinimum Initial (s)3.015.015.015.08.08.08.0Minimum Split (s)9.524.024.024.018.018.018.0	
Minimum Split (s) 9.5 24.0 24.0 24.0 18.0 18.0 18.0 18.0	
Minimum Split (s) 9.5 24.0 24.0 18.0 18.0 18.0	Minimum Initial (s)
Total Split (s) 14.0 132.0 118.0 118.0 18.0 18.0 18.0 18.0	Total Split (s)
Total Split (%) 9.3% 88.0% 78.7% 78.7% 12.0% 12.0% 12.0% 12.0%	
Yellow Time (s) 3.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	
All-Red Time (s) 0.0 1.5 1.5 1.5 1.5 1.5 1.5 1.5	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Lost Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0	
Lead/Lag Lead Lag Lag	
Lead-Lag Optimize? Yes Yes Yes	Lead-Lag Optimize?
Recall Mode None C-Min C-Min C-Min None None None None	
Act Effct Green (s) 128.9 126.4 120.6 120.6 11.6 11.6 11.6	
Actuated g/C Ratio 0.86 0.84 0.80 0.80 0.08 0.08 0.08	Actuated g/C Ratio
v/c Ratio 0.06 0.34 0.00 0.36 0.03 0.56 0.48	v/c Ratio
Control Delay 1.6 3.7 4.0 5.0 63.7 85.9 79.5	
Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Delay 1.6 3.7 4.0 5.0 63.7 85.9 79.5	
LOS A A A A E F E	
Approach Delay 3.7 5.0 63.7 82.8	
Approach LOS A A E F	
Queue Length 50th (ft) 1 21 0 136 3 56 54	
Queue Length 95th (ft) 8 75 2 163 14 109 104	

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 5

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	504	2856		452	2633			115		116	129	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.06	0.34		0.00	0.36			0.03		0.51	0.44	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	50											
Offset: 94 (63%), Referen	ced to phase	2:EBTL a	and 6:WB	TL, Start	of Green							
Natural Cycle: 55												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.56												
Intersection Signal Delay:					tersectior							
Intersection Capacity Utiliz	zation 41.8%			IC	U Level o	of Service	A					
Analysis Period (min) 15												
Splits and Phases: 3: G	oebbert Roa	d & Algon	quin Road	d								

→ Ø2 (R) 132 s 18 s Ø5 ↓ Ø6 (R) 14 s 118 s 18 s Ø8

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		ሻ	र्स	11	<u> </u>	^			411176	
Traffic Volume (vph)	0	0	4	272	Ö	541	3	1294	0	0	1344	3
Future Volume (vph)	0	0	4	272	0	541	3	1294	0	0	1344	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt		0.865				0.850						
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Flt Permitted				0.950	0.950		0.950					
Satd. Flow (perm)	0	1096	0	1698	1698	2760	1805	5151	0	0	6399	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	50%	1%	0%	3%	0%	6%	0%	0%	2%	67%
Shared Lane Traffic (%)	• / •	• / •		50%	• / •	• • • •	• / •	• / •	•,•	0,0	_/*	0.70
Lane Group Flow (vph)	0	4	0	148	148	588	3	1407	0	0	1464	0
Turn Type	-	NA	-	Split	NA	Prot	Prot	NA		-	NA	-
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4			-	-	-	-				-	
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		40.0	40.0	40.0	16.0	94.0			78.0	
Total Split (%)	10.7%	10.7%		26.7%	26.7%	26.7%	10.7%	62.7%			52.0%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		38.6	38.6	38.6	5.9	96.4			94.2	
Actuated g/C Ratio		0.05		0.26	0.26	0.26	0.04	0.64			0.63	
v/c Ratio		0.07		0.34	0.34	0.83	0.04	0.42			0.36	
Control Delay		69.8		47.6	47.6	63.1	70.3	14.2			9.2	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		69.8		47.6	47.6	63.1	70.3	14.2			9.2	
LOS		E		D	D	E	E	B			A	
Approach Delay		69.8		_	57.9	_	_	14.3			9.2	
Approach LOS		E			E			В			A	
Queue Length 50th (ft)		4		121	121	301	3	235			102	
Queue Length 95th (ft)		17		202	202	#438	15	312			148	
								<i></i>				

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 7

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300	155					
Base Capacity (vph)		73		438	438	713	138	3311			4019	
Starvation Cap Reductn		0		0	0	0	0	0			0	
Spillback Cap Reductn		0		0	0	0	0	0			0	
Storage Cap Reductn		0		0	0	0	0	0			0	
Reduced v/c Ratio		0.05		0.34	0.34	0.82	0.02	0.42			0.36	
Intersection Summary												
Area Type: C	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 61 (41%), Referenced	d to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 75												
Control Type: Actuated-Coor	dinated											
Maximum v/c Ratio: 0.83												
Intersection Signal Delay: 22				In	tersectior	n LOS: C						
Intersection Capacity Utilizat	ion 64.3%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
# 95th percentile volume ex			eue may	be longer	ſ.							
Queue shown is maximur	n after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

🕇 Ø2 (R) 💗	_{Ø4}	
94 s	16 s	40 s
▲ Ø5 🖡 🖡 Ø6 (R)		
16 s 78 s		

Intersection							
Int Delay, s/veh	0.1						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	2
Lane Configurations	朴朴			*††		1	1
Traffic Vol, veh/h	1125	11	0	1138	0	9)
Future Vol, veh/h	1125	11	0	1138	0	9)
Conflicting Peds, #/hr	0	0	0	0	0	0)
Sign Control	Free	Free	Free	Free	Stop	Stop)
RT Channelized	-	None	-	None	-	None	ę
Storage Length	-	-	-	-	-	0)
Veh in Median Storage	e, # 0	-	-	0	0	-	-
Grade, %	0	-	-	0	0	-	-
Peak Hour Factor	95	95	95	95	95	92	2
Heavy Vehicles, %	0	0	0	0	0	0)
Mvmt Flow	1184	12	0	1198	0	10)

Major/Minor	Major1	N	/lajor2	1	Vinor1	
Conflicting Flow All	0	0	-	-	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	386
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver		-	-	-	-	386
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.6	
HCM LOS					В	
Minor Lane/Major Mvr	nt	NBLn1	EBT	EBR	WBT	
Capacity (veh/h)		386	-	-	-	
HCM Lane V/C Ratio		0.025	-	-	-	
HCM Control Delay (s)	14.6	-	-	-	
HCM Lane LOS	,	В	-	-	-	
HCM 95th %tile Q(veh	ı)	0.1	-	-	-	

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 1

Intersection Capacity Utilization

5: Arlington Heights					1 5		<u>.</u>					25/2023
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						1		<u></u> ↑↑₽			1111	7
Volume (vph)	0	0	0	0	0	38	0	1812	35	0	1347	394
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	0	0	38	0	1847	0	0	1347	394
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	0	0	1615	0	5161	0	0	7264	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	2.8	0.0	42.9	0.0	0.0	22.3	29.3
Adj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	8.0	0.0	46.9	0.0	0.0	26.3	33.3
Permitted Option												
Adj Saturation A (vph)	0	0		0	0		0	1720		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	42.9		0.0	22.3	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			0.0			42.9			22.3	
Adj Reference Time (s)		8.0			8.0			46.9			26.3	
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	42.9		0.0	22.3	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	42.1		0.0	22.3	
Reference Time (s)	0.0	0.0		0.0	0.0		42.9	42.9		22.3	22.3	
Adj Reference Time (s)	0.0	0.0		0.0	0.0		46.9	46.9		26.3	26.3	
Summary	EB WB		NB SB	Co	mbined							
Protected Option (s)	0.0		46.9									
Permitted Option (s)	8.0		46.9									
Split Option (s)	0.0		73.2									
Minimum (s)	0.0		46.9		46.9							
Right Turns	WBR	SBR										
Adj Reference Time (s)	8.0	33.3										
Cross Thru Ref Time (s)	46.9	0.0										
Oncoming Left Ref Time (s)	0.0	0.0										
Combined (s)	54.9	33.3										
Intersection Summary												
Intersection Capacity Utilizati			45.8%		U Level o				A			

Reference Times and Phasing Options do not represent an optimized timing plan.

AMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Morning Peak Housynchro 11 Report Page 1 <u>Capacity Analysis Summary Sheets</u> Weekday Evening Peak Hour – Phase I Conditions

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘ	^	1	ካካ	^	1	ሻሻ	^	1	ካካ	4111	
Traffic Volume (vph)	90	816	467	504	860	224	520	1334	471	239	1261	99
Future Volume (vph)	90	816	467	504	860	224	520	1334	471	239	1261	99
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230		•	250		•	300			280		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt	0.01	0.01	0.850	0.01	0.01	0.850	0.01	0.01	0.850	0.01	0.989	0.00
Flt Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950	0.000	
Satd. Flow (prot)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Flt Permitted	0.950	0101	1010	0.950	0000	1000	0.950	0100	1000	0.950	0100	Ű
Satd. Flow (perm)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6400	0
Right Turn on Red	0002	0101	No	0-100	0000	No	0407	0400	No	0007	0-100	No
Satd. Flow (RTOR)			110									110
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	0.00	2%	2%	1%	1%	1%	3%	4%	1%	1%
Shared Lane Traffic (%)	0 /0	070	0 /0	2 /0	2 /0	170	170	170	J /0	7/0	170	170
Lane Group Flow (vph)	95	859	492	531	905	236	547	1404	496	252	1431	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	U
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases	1	-	4	5	0	8	5	2	2	1	0	
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase	1	т.	5	5	0		0	2	0	•	0	
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	15.0	42.0	33.0	31.0	58.0	20.0	33.0	57.0	31.0	20.0	44.0	
Total Split (%)	10.0%	28.0%	22.0%	20.7%	38.7%	13.3%	22.0%	38.0%	20.7%	13.3%	29.3%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	9.1	36.3	69.7	25.9	53.1	73.8	27.3	52.0	84.0	14.7	39.4	
Actuated g/C Ratio	0.06	0.24	0.46	0.17	0.35	0.49	0.18	0.35	0.56	0.10	0.26	
v/c Ratio	0.00	0.24	0.40	0.90	0.33	0.40	0.10	0.35	0.50	0.10	0.20	
Control Delay	74.4	55.1	35.9	96.6	29.8	18.6	59.0	41.7	28.4	81.7	58.6	
Queue Delay	0.0	0.0	0.0	90.0 0.0	29.0	0.0	0.0	0.0	0.6	0.0	0.0	
Total Delay	74.4	55.1	35.9	96.6	29.8	18.6	59.0	41.7	29.0	81.7	58.6	
LOS	74.4 E	55.1 E	35.9 D	90.0 F	29.0 C	10.0 B	59.0 E	41.7 D	29.0 C	61.7 F	50.0 E	
Approach Delay	C	⊑ 49.9	U	Г	49.4	D	E	43.0	U	Г	⊏ 62.1	
Approach LOS		49.9 D			49.4 D			43.0 D			62.1 E	
Queue Length 50th (ft)	46	283	361	285	180	100	242	473	379	125	⊑ 394	
Queue Length 95th (ft)	40 78	283 334	492	265 m#365	205	m135	#318	473 529	5379 537	125	394 442	
	10	554	492	m#303	200	11130	#310	529	557	175	442	

PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak Housynchro 11 Report Page 1

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	245	1248	763	606	1896	795	658	1875	883	347	1680	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	134	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.69	0.64	0.88	0.48	0.30	0.83	0.75	0.66	0.73	0.85	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150)											
Offset: 77 (51%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	, Start of (Green							
Natural Cycle: 90												
Control Type: Actuated-Coc	ordinated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 5					tersectior							
Intersection Capacity Utiliza	ation 81.6%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
# 95th percentile volume			eue may	be longer	ſ.							
Queue shown is maximu												
m Volume for 95th percer	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 1: Arlington Heights Road & Algonquin Road												

₩ _{Ø1}	1 Ø2 (R)	€ Ø3		₩04	
20 s	57 s	31 s		42 s	
\$ Ø5	📕 🕈 Ø6 (R)		4 [®] _ Ø8		
33 s	44 s	15 s	58 s		

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	7	<u>ተተ</u> ኑ		٦	<u>ተተ</u> ጮ		<u>۲</u>	ef 🕺		۲ ۲	eî	
Traffic Volume (vph)	183	1279	35	34	1305	25	84	6	18	31	0	173
Future Volume (vph)	183	1279	35	34	1305	25	84	6	18	31	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.886			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4926	0	1805	5072	0	1805	1461	0	1752	1599	0
Flt Permitted	0.151			0.170			0.374			0.741		
Satd. Flow (perm)	287	4926	0	323	5072	0	711	1461	0	1367	1599	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	1398	0	36	1415	0	89	25	0	33	184	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	14.0	108.0		14.0	108.0		28.0	28.0		28.0	28.0	
Total Split (%)	9.3%	72.0%		9.3%	72.0%		18.7%	18.7%		18.7%	18.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	119.4	109.3		113.2	104.5		20.9	20.9		20.9	20.9	
Actuated g/C Ratio	0.80	0.73		0.75	0.70		0.14	0.14		0.14	0.14	
v/c Ratio	0.61	0.39		0.12	0.40		0.90	0.12		0.17	0.83	
Control Delay	25.0	5.2		2.6	5.8		129.4	57.4		58.7	91.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.0	5.2		2.6	5.8		129.4	57.4		58.7	91.3	
LOS	С	А		А	А		F	Е		Е	F	
Approach Delay		7.6			5.7			113.6			86.3	
Approach LOS		А			А			F			F	
Queue Length 50th (ft)	47	93		3	110		86	22		29	176	
Queue Length 95th (ft)	m112	126		m6	60		#197	52		64	#298	

PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak Housynchro 11 Report Page 3

Lanes, Volumes, Timings 2: Tonne Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	334	3590		356	3534		104	214		200	234	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.39		0.10	0.40		0.86	0.12		0.17	0.79	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15												
Offset: 140 (93%), Referen	nced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	pordinated											
Maximum v/c Ratio: 0.90												
Intersection Signal Delay:					tersectior							
Intersection Capacity Utiliz	zation 71.6%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
# 95th percentile volume	e exceeds ca	pacity, qu	eue may	be longer	٢.							
	Queue shown is maximum after two cycles.											
m Volume for 95th percentile queue is metered by upstream signal.												
			_ .									

Splits and Phases: 2: Tonne Road & Algonquin Road

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14 s	108 s	28 s
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14 s	108 s	28 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT Lane Configurations ↑ ↑ <th>SBR 46 46 1900 0 0 1.00</th>	SBR 46 46 1900 0 0 1.00
Traffic Volume (vph)59114852126583611573Future Volume (vph)59114852126583611573Ideal Flow (vphpl)190019001900190019001900190019001900190019001900Storage Length (ft)1100165000100	46 1900 0 0
Traffic Volume (vph)59114852126583611573Future Volume (vph)59114852126583611573Ideal Flow (vphpl)190019001900190019001900190019001900190019001900Storage Length (ft)1100165000100	46 1900 0 0
Ideal Flow (vphpl)19001	1900 0 0
Ideal Flow (vphpl)19001	0 0
Storage Length (ft) 110 0 165 0 0 0 100	0 0
	0
Storage Lanes 1 0 1 0 0 0 1	
Taper Length (ft) 130 100 25 80	1 00
Lane Util. Factor 1.00 0.95 0.95 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00	
Frt 0.999 0.991 0.983 0.859	
Flt Protected 0.950 0.950 0.964 0.950	
Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632	0
Flt Permitted 0.160 0.234 0.785 0.752	
Satd. Flow (perm) 304 3435 0 445 3509 0 0 1303 0 1429 1632	0
Right Turn on Red No No No	No
Satd. Flow (RTOR)	
Link Speed (mph) 45 45 25 25	
Link Distance (ft) 1142 483 222 765	
Travel Time (s) 17.3 7.3 6.1 20.9	
Peak Hour Factor 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96	0.96
Heavy Vehicles (%) 0% 5% 0% 0% 2% 1% 0% 100% 0% 0% 0%	0%
Shared Lane Traffic (%)	• / •
Lane Group Flow (vph) 61 1201 0 2 1404 0 0 8 0 59 51	0
Turn Type pm+pt NA Perm NA Perm NA Perm NA	Ū
Protected Phases 5 2 6 8 4	
Permitted Phases 2 6 8 4	
Detector Phase 5 2 6 6 8 8 4 4	
Switch Phase	
Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0	
Minimum Split (s) 9.5 24.0 24.0 24.0 18.0 18.0 18.0 18.0	
Total Split (s) 14.0 125.0 111.0 111.0 25.0 25.0 25.0 25.0 25.0	
Total Split (%) 9.3% 83.3% 74.0% 74.0% 16.7% 16.7% 16.7% 16.7%	
Yellow Time (s) 3.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	
All-Red Time (s) 0.0 1.5 1.5 1.5 1.5 1.5 1.5 1.5	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Lost Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0	
Lead/Lag Lead Lag Lag	
Lead-Lag Optimize? Yes Yes Yes	
Recall Mode None C-Min C-Min None None None None None	
Act Effct Green (s) 130.7 129.4 121.5 121.5 12.6 12.6 12.6	
Actuated g/C Ratio 0.87 0.86 0.81 0.81 0.08 0.08 0.08	
v/c Ratio 0.19 0.41 0.01 0.49 0.07 0.50 0.38	
Control Delay 3.3 3.4 5.0 6.9 62.4 78.7 71.6	
Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Delay 3.3 3.4 5.0 6.9 62.4 78.7 71.6	
LOS A A A A E E E	
Approach Delay 3.4 6.9 62.4 75.4	
Approach LOS A A E E	
Queue Length 50th (ft) 9 101 0 242 7 56 48	
Queue Length 95th (ft) 18 141 3 340 25 104 92	

PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak Housynchro 11 Report Page 5

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	369	2964		360	2841			165		181	206	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.17	0.41		0.01	0.49			0.05		0.33	0.25	
Intersection Summary												
Area Type: Other												
Cycle Length: 150												
Actuated Cycle Length: 150	0											
Offset: 120 (80%), Referen	ced to phase	e 2:EBTL	and 6:WI	BTL, Star	t of Greer	า						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.50												
Intersection Signal Delay: 8					tersectior							
Intersection Capacity Utilization	ation 65.7%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
Splits and Phases: 3: Go	bebbert Road	d & Algon	quin Roa	d								

ø₂ (R)♥	Ø4
125 s	25 s
≠ Ø5 • √ Ø6 (R)	↑ø8
14s 111s	25 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		ሻ	ર્સ	11	5	^			411176	
Traffic Volume (vph)	2	0	0	205	1	556	0	1792	0	0	1700	1
Future Volume (vph)	2	0	0	205	1	556	0	1792	0	0	1700	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt						0.850						
Flt Protected		0.950		0.950	0.953							
Satd. Flow (prot)	0	1805	0	1681	1687	2814	1900	5406	0	0	6471	0
Flt Permitted				0.950	0.953							
Satd. Flow (perm)	0	1900	0	1681	1687	2814	1900	5406	0	0	6471	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	2	0	105	107	573	0	1847	0	0	1754	0
Turn Type	Perm	NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		32.0	32.0	32.0	16.0	102.0			86.0	
Total Split (%)	10.7%	10.7%		21.3%	21.3%	21.3%	10.7%	68.0%			57.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		39.1	39.1	39.1		96.0			96.0	
Actuated g/C Ratio		0.05		0.26	0.26	0.26		0.64			0.64	
v/c Ratio		0.02		0.24	0.24	0.78		0.53			0.42	
Control Delay		67.5		47.3	47.4	59.6		15.5			14.1	
Queue Delay		0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay		67.5		47.3	47.4	59.6		15.5			14.1	
LOS		Е		D	D	E		В			В	
Approach Delay		67.5			56.3			15.5			14.1	
Approach LOS		E			E			В			В	
Queue Length 50th (ft)		2		83	85	289		342			211	
Queue Length 95th (ft)		11		160	162	#497		379			254	
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PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak Housynchro 11 Report Page 7

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300						
Base Capacity (vph)		126		437	439	732		3459			4141	
Starvation Cap Reductn		0		0	0	0		0			0	
Spillback Cap Reductn		0		0	0	0		0			0	
Storage Cap Reductn		0		0	0	0		0			0	
Reduced v/c Ratio		0.02		0.24	0.24	0.78		0.53			0.42	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	0											
Offset: 41 (27%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 80												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.78												
Intersection Signal Delay: 22.3 Intersection LOS: C												
Intersection Capacity Utilization 74.0% ICU Level of Service D												
Analysis Period (min) 15												
# 95th percentile volume	•	• •	eue may	be longer								
Queue shown is maxim	um after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

¶ø2 (R)	,	 ₽04	₽ Ø8	
102 s		16 s	32 s	
▲ ø5	Ø6 (R)			
16 s	86 s			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	朴朴			^		1
Traffic Vol, veh/h	1488	28	0	1584	0	9
Future Vol, veh/h	1488	28	0	1584	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1566	29	0	1667	0	9

Major/Minor M	Major1	Ν	/lajor2	1	Minor1	
Conflicting Flow All	0	0	-	-	-	798
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	286
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	286
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		18	
HCM LOS	-		-		C	
N //	.1		EDT			
Minor Lane/Major Mvm	It	NBLn1	EBT	EBR	WBT	
Capacity (veh/h)		286	-	-	-	
HCM Lane V/C Ratio		0.033	-	-	-	
HCM Control Delay (s)		18	-	-	-	
HCM Lane LOS		C	-	-	-	
HCM 95th %tile Q(veh))	0.1	-	-	-	

PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak Housynchro 11 Report Page 1

Intersection Capacity Utilization

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Movement	EBL	EBT	EBR	▼ WBL	WBT	WBR	NBL	NBT	r NBR	SBL	▼ SBT	SBI
ane Configurations			LBIX	TIDE .	1101	1	NDL	*††	NBR	ODL	tttt	1 <u></u>
/olume (vph)	0	0	0	0	0	45	0	2280	70	0	1701	52
Pedestrians	0	U	U	U	U		0	2200	10	U	1701	52
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			N
deal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	190
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	12
	0	0				45			0	0	1701	52
/olume Combined (vph)			0	0	0		0	2350				
ane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.0
Furning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.8
Saturated Flow (vph)	0	0	0	0	0	1615	0	5152	0	0	7264	161
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	3.3	0.0	54.7	0.0	0.0	28.1	39
Adj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	8.0	0.0	58.7	0.0	0.0	32.1	43
Permitted Option												
Adj Saturation A (vph)	0	0		0	0		0	1717		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	54.7		0.0	28.1	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			0.0			54.7			28.1	
Adj Reference Time (s)		8.0			8.0			58.7			32.1	
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	54.7		0.0	28.1	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	53.1		0.0	28.1	
Reference Time (s)	0.0	0.0		0.0	0.0		54.7	54.7		28.1	28.1	
Adj Reference Time (s)	0.0	0.0		0.0	0.0		58.7	58.7		32.1	32.1	
Summary	EB WB		NB SB	Co	mbined							
Protected Option (s)	0.0		58.7	0	monieu							
Permitted Option (s)	8.0		58.7									
Split Option (s)	0.0		90.8									
Minimum (s)	0.0		58.7		58.7							
()	0.0		50.7		50.7							
Right Turns	WBR	SBR										
Adj Reference Time (s)	8.0	43.3										
Cross Thru Ref Time (s)	58.7	0.0										
Dncoming Left Ref Time (s)	0.0	0.0										
Combined (s)	66.7	43.3										
ntersection Summary												

Reference Times and Phasing Options do not represent an optimized timing plan.

<u>Capacity Analysis Summary Sheets</u> Weekday Morning Peak Hour – Total Buildout Conditions

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘኘ	^	1	ካካ	^	1	ሻሻ	^	1	ኘኘ	4111	
Traffic Volume (vph)	46	681	336	503	609	162	456	1114	374	198	1017	93
Future Volume (vph)	46	681	336	503	609	162	456	1114	374	198	1017	93
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		0
Taper Length (ft)	230			250		•	300			280		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt			0.850			0.850			0.850		0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Flt Permitted	0.950	0200		0.950			0.950			0.950		
Satd. Flow (perm)	3367	5200	1553	3303	5056	1442	3335	5301	1495	3183	6330	0
Right Turn on Red	0001	0200	No	0000	0000	No		0001	No	0100	0000	No
Satd. Flow (RTOR)						110						
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	5%	4%	6%	8%	12%	5%	3%	8%	10%	2%	1%
Shared Lane Traffic (%)	170	0,0	170	0,0	0,0	1270	070	0,0	0,0	1070	270	170
Lane Group Flow (vph)	47	695	343	513	621	165	465	1137	382	202	1133	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Ŭ
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	17.0	38.0	31.0	36.0	57.0	18.0	31.0	58.0	36.0	18.0	45.0	
Total Split (%)	11.3%	25.3%	20.7%	24.0%	38.0%	12.0%	20.7%	38.7%	24.0%	12.0%	30.0%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	7.5	32.5	63.3	28.2	55.2	74.0	24.9	55.5	89.7	12.9	43.5	
Actuated g/C Ratio	0.05	0.22	0.42	0.19	0.37	0.49	0.17	0.37	0.60	0.09	0.29	
v/c Ratio	0.28	0.62	0.52	0.83	0.33	0.23	0.84	0.58	0.43	0.74	0.62	
Control Delay	72.3	55.9	35.3	64.8	27.8	19.6	82.0	29.5	14.0	83.6	48.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	72.3	55.9	35.3	64.8	27.8	19.6	82.0	29.5	14.0	83.6	48.8	
LOS	E	E	D	E	С	В	F	С	В	F	D	
Approach Delay		50.1			41.4			38.8			54.0	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	23	223	236	211	140	72	242	246	156	100	292	
Queue Length 95th (ft)	45	275	342	m268	m173	m123	287	276	194	146	334	

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Moßyngliffealkl lifterport Page 1

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	280	1143	672	693	1859	717	589	1960	926	286	1834	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	0.61	0.51	0.74	0.33	0.23	0.79	0.58	0.41	0.71	0.62	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15												
Offset: 58 (39%), Reference	ed to phase	2:NBT ar	nd 6:SBT,	, Start of	Green							
Natural Cycle: 80												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.84												
Intersection Signal Delay: 45.1 Intersection LOS: D												
Intersection Capacity Utilization 73.6% ICU Level of Service D												
Analysis Period (min) 15												
m Volume for 95th percentile queue is metered by upstream signal.												
Splits and Phases: 1: Arlington Heights Road & Algonquin Road												

Ø1	Ø2 (R)	1 03	₩ Ø4
18 s	58 s	36 s	38 s
A Ø5	🛛 🕇 🖉 Ø6 (R)		▲ Ø8
31 s	45 s	17 s	57 s

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	<u>ک</u>	ተተኈ		ľ	ተተኈ		1	el el		1	el el	
Traffic Volume (vph)	100	999	145	79	927	16	193	1	78	17	1	172
Future Volume (vph)	100	999	145	79	927	16	193	1	78	17	1	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.998			0.852			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4795	0	1805	4751	0	1805	1298	0	1703	1601	0
Flt Permitted	0.238			0.183			0.501			0.701		
Satd. Flow (perm)	439	4795	0	348	4751	0	952	1298	0	1257	1601	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	7%	0%	0%	9%	7%	0%	0%	25%	6%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	1244	0	86	1025	0	210	86	0	18	188	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	24.0	102.0		13.0	91.0		35.0	35.0		35.0	35.0	
Total Split (%)	16.0%	68.0%		8.7%	60.7%		23.3%	23.3%		23.3%	23.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	103.2	92.5		101.8	91.9		34.5	34.5		34.5	34.5	
Actuated g/C Ratio	0.69	0.62		0.68	0.61		0.23	0.23		0.23	0.23	
v/c Ratio	0.29	0.42		0.28	0.35		0.96	0.29		0.06	0.51	
Control Delay	7.5	11.4		7.4	11.8		108.6	54.2		50.5	58.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.5	11.4		7.4	11.8		108.6	54.2		50.5	58.8	
LOS	А	В		А	В		F	D		D	E	
Approach Delay		11.1			11.4			92.8			58.1	
Approach LOS		В			В			F			E	
Queue Length 50th (ft)	22	120		17	96		~239	74		15	170	
Queue Length 95th (ft)	m32	147		28	108		#410	130		39	257	

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Moßyinglifealki lifterport Page 3

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	489	3114		333	2998		219	298		289	367	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.22	0.40		0.26	0.34		0.96	0.29		0.06	0.51	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150)											
Offset: 115 (77%), Referen	ced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.96												
Intersection Signal Delay: 2				In	tersectior	n LOS: C						
Intersection Capacity Utiliza	ation 66.6%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
 Volume exceeds capac 			ally infini	te.								
Queue shown is maximi												
# 95th percentile volume			eue may	be longe	r.							
Queue shown is maximi												
m Volume for 95th percer	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 2: Tonne Road & Algonquin Road												
		Aigonqui	nittoau									

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13 s	102 s	35 s
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24 s	91s	35 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

Lane Group EBL EBT EBR WBL WBT NBL NBT NBR SBL SBT SBR Lane Configurations 1 1+p 1 1+p 1+p< 1+p 1+p< 1+p 1+p< 1+p< 1+p< <th></th> <th>٦</th> <th>+</th> <th>\mathbf{F}</th> <th>4</th> <th>ł</th> <th>•</th> <th>•</th> <th>1</th> <th>1</th> <th>1</th> <th>ŧ</th> <th>~</th>		٦	+	\mathbf{F}	4	ł	•	•	1	1	1	ŧ	~
Traffic Oxiome (vph) 27 1348 5 1 1079 26 3 0 0 55 2 50 Future Volume (vph) 1900 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Oxiome (vph) 27 1348 5 1 1079 26 3 0 0 55 2 50 Future Volume (vph) 1900 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100	Lane Configurations	<u>۲</u>	A12		<u>۲</u>	≜1 }			4		۲	4	
ideal Flow (vphi) 1900 <td>Traffic Volume (vph)</td> <td></td> <td></td> <td>5</td> <td>-</td> <td></td> <td>26</td> <td>3</td> <td></td> <td>0</td> <td></td> <td></td> <td>50</td>	Traffic Volume (vph)			5	-		26	3		0			50
Storage Length (t) 110 0 165 0 0 100 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 <td>Future Volume (vph)</td> <td>27</td> <td>1348</td> <td>5</td> <td>1</td> <td>1079</td> <td>26</td> <td>3</td> <td>0</td> <td>0</td> <td>55</td> <td>2</td> <td>50</td>	Future Volume (vph)	27	1348	5	1	1079	26	3	0	0	55	2	50
Storage Lanes 1 0 1 0 0 1 0 Taper Length (t) 130 100 25 80	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Lanes 1 0 1 0 0 1 0 Taper Length (ft) 130 100 25 80	Storage Length (ft)	110		0	165		0	0		0	100		0
Tape Langth (ft) 130 100 25 80 Lane ULI, Factor 1.00 0.95 0.95 1.00 </td <td></td> <td>1</td> <td></td> <td>0</td> <td>1</td> <td></td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>1</td> <td></td> <td>0</td>		1		0	1		0	0		0	1		0
Lane Util. Factor 1.00 0.95 0.95 1.00 9.95 1.00 <td></td> <td>130</td> <td></td> <td></td> <td>100</td> <td></td> <td></td> <td>25</td> <td></td> <td></td> <td>80</td> <td></td> <td></td>		130			100			25			80		
Fit Protected 0.950 0.950 0.950 0.950 Satd. Flow (prot) 1671 3371 0 1805 3273 0 0 1806 0 1736 1536 0 Satd. Flow (perm) 378 3371 0 340 3273 0 0 1370 0 1381 1536 0 Righ Turn on Red No No No No No No No No No Link Distance (ft) 1142 443 222 765 76 73 6.1 20.9 99 Peak Hour Factor 0.94 0.9		1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot) 1671 3371 0 1805 3273 0 0 1805 0 1736 1536 0 FI Permitted 0.215 0.179 0.756 0.756 0.756 0.756 0.756 0 1370 0 1381 1536 0 0 1370 0 1381 1536 0 0 1370 0 1381 1536 0 0 1370 0 1381 1536 0 No Satd. Flow (Ph 104) 1142 483 2222 765 120.99 Perek Hour Factor 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94	Frt		0.999			0.996						0.855	
Fit Permitted 0.215 0.179 0.721 0.756 Satd. Flow (perm) 378 3371 0 340 3273 0 0 1370 0 1381 1536 0 Satd. Flow (RTOR) No No No No No No No Link Dstance (ft) 1142 443 222 765 75 Travel Time (s) 17.3 7.3 6.1 20.9 9 Peak Hour Factor 0.94 </td <td>Flt Protected</td> <td>0.950</td> <td></td> <td></td> <td>0.950</td> <td></td> <td></td> <td></td> <td>0.950</td> <td></td> <td>0.950</td> <td></td> <td></td>	Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (perm) 378 3371 0 340 3273 0 0 1370 0 1381 1536 0 Right Turn on Red No No No No No No No Link Speed (mph) 45 45 25 25 1 1 1 1 1 20.9 1 1 1 20.9 1 1 20.9 1 1 20.9 1 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 20.9 1 1 1 0 0 3 0 5 0 1 1 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1	Satd. Flow (prot)	1671	3371	0	1805	3273	0	0	1805	0	1736	1536	0
Right Turn on Red No No No No No No Satd. Flow (RTOR) Link Speed (mph) 45 45 25 25 Link Distance (th) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94<	Flt Permitted	0.215			0.179				0.721		0.756		
Satd. Flow (RTOR) Link Speed (mph) 45 45 25 25 Link Distance (t) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94	Satd. Flow (perm)	378	3371	0	340	3273	0	0	1370	0	1381	1536	0
Satd. Flow (RTOR) Link Speed (mph) 45 45 26 25 Link Distance (t) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94 0.9	Right Turn on Red			No			No			No			No
Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94													
Link Distance (ft) 1142 483 222 765 Travel Time (s) 17.3 7.3 6.1 20.9 Peak Hour Factor 0.94	Link Speed (mph)		45			45			25			25	
Peak Hour Factor 0.94			1142			483			222			765	
Heavy Vehicles (%) 8% 7% 0% 0% 10% 4% 0% 0% 4% 0% 6% Shared Lane Traffic (%) 29 1439 0 1 1176 0 0 3 0 59 55 0 Tum Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase 5 2 6 6 8 8 4 4 Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0 18.0	Travel Time (s)		17.3			7.3			6.1			20.9	
Shared Lane Traffic (%) Lane Group Flow (vph) 29 1439 0 1 1176 0 0 3 0 59 55 0 Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 Permitted Phases 2 6 8 8 4 Permitted Phases 2 6 8 8 4 Switch Phase 30 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Initial (s) 3.0 15.0 15.0 8.0 8.0 8.0 8.0 Total Split (s) 9.3 88.0% 78.7% 78.7% 12.0% 12.0% 12.0% 12.0% Vellow Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 Lota Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0	Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%) Lane Group Flow (vph) 29 1439 0 1 1176 0 0 3 0 59 55 0 Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 Permitted Phases 2 6 8 8 4 Permitted Phases 2 6 8 8 4 Switch Phase 30 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Initial (s) 3.0 15.0 15.0 8.0 8.0 8.0 8.0 Total Split (s) 9.3 88.0% 78.7% 78.7% 12.0% 12.0% 12.0% 12.0% Vellow Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 Lota Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0	Heavy Vehicles (%)	8%	7%	0%	0%	10%	4%	0%	0%	0%	4%	0%	6%
Lane Group Flow (vph) 29 1439 0 1 1176 0 0 3 0 59 55 0 Turn Type pm+pt NA Perm NA Sizes A A A A A A A A A													
Turn Type pm+pt NA Perm NA Perm NA Perm NA Protected Phases 5 2 6 8 4 Permitted Phases 2 6 8 4 Detector Phase 5 2 6 6 8 4 Switch Phase 5 2 6 6 8 8 4 Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 Minimum Split (s) 9.5 24.0 24.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 12.0%		29	1439	0	1	1176	0	0	3	0	59	55	0
Protected Phases 5 2 6 8 4 Permitted Phases 2 6 8 4 Detector Phase 5 2 6 6 8 8 4 4 Switch Phase 5 2 6 6 8 8 4 4 Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Initial (s) 9.5 24.0 24.0 24.0 18.0 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0%	Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Detector Phase 5 2 6 6 8 8 4 4 Switch Phase Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Initial (s) 9.5 24.0 24.0 18.0 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 1		· ·	2			6			8			4	
Switch Phase Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 Minimum Split (s) 9.5 24.0 24.0 18.0 18.0 18.0 18.0 Total Split (s) 14.0 132.0 118.0 118.0 18.0 18.0 18.0 18.0 Total Split (%) 9.3% 88.0% 78.7% 78.7% 12.0%	Permitted Phases	2			6			8			4		
Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0 Minimum Split (s) 9.5 24.0 24.0 24.0 18	Detector Phase	5	2		6	6		8	8		4	4	
Minimum Split (s) 9.5 24.0 24.0 24.0 18.0 18.0 18.0 18.0 Total Split (s) 14.0 132.0 118.0 118.0 18.0 <t< td=""><td>Switch Phase</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Switch Phase												
Total Split (s) 14.0 132.0 118.0 118.0 18.0 18.0 18.0 18.0 18.0 Total Split (%) 9.3% 88.0% 78.7% 78.7% 12.0%	Minimum Initial (s)	3.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Total Split (%) 9.3% 88.0% 78.7% 78.7% 12.0% 12.0% 12.0% 12.0% Yellow Time (s) 3.5 4.5	Minimum Split (s)	9.5	24.0		24.0	24.0		18.0	18.0		18.0	18.0	
Yellow Time (s) 3.5 4.5 1.0 1.0	Total Split (s)	14.0	132.0		118.0	118.0		18.0	18.0		18.0	18.0	
All-Red Time (s) 0.0 1.5	Total Split (%)	9.3%	88.0%		78.7%	78.7%		12.0%	12.0%		12.0%	12.0%	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Lost Time (s) 3.5 6.0 7 0.0 7 0.0 7 0.0 7 0.0 7 0.0 7 0.0 7 0.0 7 0.0	Yellow Time (s)	3.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Total Lost Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 Lead/Lag Lead Lag Log None None<	All-Red Time (s)	0.0	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lead/Lag Lead Lag Lag Lead-Lag Optimize? Yes Yes Yes Recall Mode None C-Min C-Min None None None Act Effct Green (s) 129.6 127.1 121.4 121.4 10.9 10.9 10.9 Actuated g/C Ratio 0.86 0.85 0.81 0.81 0.07 0.07 0.07 v/c Ratio 0.08 0.50 0.00 0.44 0.03 0.59 0.50 Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 <td>Lost Time Adjust (s)</td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td></td> <td></td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td></td>	Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Lead-Lag Optimize? Yes Yes Yes Yes Recall Mode None C-Min C-Min None None None None Act Effct Green (s) 129.6 127.1 121.4 121.4 10.9 10.9 10.9 Actuated g/C Ratio 0.86 0.85 0.81 0.81 0.07 0.07 0.07 v/c Ratio 0.08 0.50 0.00 0.44 0.03 0.59 0.50 Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A E F F Approach Delay 4.7 5.3 64.7 90.6 81.9 LOS A A A E F F Approach LOS	Total Lost Time (s)	3.5	6.0		6.0	6.0			6.0		6.0	6.0	
Recall Mode None C-Min C-Min C-Min None	Lead/Lag	Lead			Lag	Lag							
Act Effct Green (s) 129.6 127.1 121.4 121.4 10.9 10.9 10.9 Actuated g/C Ratio 0.86 0.85 0.81 0.81 0.07 0.07 0.07 v/c Ratio 0.08 0.50 0.00 0.44 0.03 0.59 0.50 Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A E F F Approach Delay 4.7 5.3 64.7 90.6 81.9 LOS A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Lead-Lag Optimize?	Yes			Yes	Yes							
Actuated g/C Ratio 0.86 0.85 0.81 0.81 0.07 0.07 0.07 v/c Ratio 0.08 0.50 0.00 0.44 0.03 0.59 0.50 Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A A E F F Approach Delay 4.7 5.3 64.7 90.6 81.9 LOS A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Recall Mode	None	C-Min		C-Min	C-Min		None	None		None	None	
v/c Ratio 0.08 0.50 0.00 0.44 0.03 0.59 0.50 Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A A E F F Approach Delay 4.7 5.3 64.7 90.6 81.9 LOS A A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Act Effct Green (s)	129.6	127.1		121.4	121.4			10.9		10.9	10.9	
Control Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Actuated g/C Ratio	0.86	0.85		0.81	0.81			0.07		0.07	0.07	
Queue Delay 0.0 <th< td=""><td>v/c Ratio</td><td>0.08</td><td>0.50</td><td></td><td>0.00</td><td>0.44</td><td></td><td></td><td>0.03</td><td></td><td>0.59</td><td>0.50</td><td></td></th<>	v/c Ratio	0.08	0.50		0.00	0.44			0.03		0.59	0.50	
Total Delay 1.8 4.8 4.0 5.3 64.7 90.6 81.9 LOS A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Control Delay	1.8	4.8		4.0	5.3			64.7		90.6	81.9	
LOS A A A A E F F Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52		1.8	4.8		4.0	5.3			64.7		90.6	81.9	
Approach Delay 4.7 5.3 64.7 86.4 Approach LOS A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52					А				Е		F	F	
Approach LOS A A E F Queue Length 50th (ft) 4 158 0 183 3 57 52	Approach Delay								64.7			86.4	
Queue Length 50th (ft) 4 158 0 183 3 57 52													
		4			0						57	52	
Queue Length 95th (ft) 7 139 2 221 14 109 102	Queue Length 95th (ft)	7	139		2	221			14		109	102	

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Moßyngliffealkl lifterport Page 5

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	417	2855		275	2648			109		110	122	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.07	0.50		0.00	0.44			0.03		0.54	0.45	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	50											
Offset: 94 (63%), Referen	ced to phase	2:EBTL a	and 6:WB	TL, Start	of Green							
Natural Cycle: 60												
Control Type: Actuated-Co	oordinated											
Maximum v/c Ratio: 0.59												
Intersection Signal Delay:	8.4			In	tersectior	n LOS: A						
Intersection Capacity Utiliz	zation 54.1%			IC	CU Level of	of Service	А					
Analysis Period (min) 15												
Splits and Phases: 3. G												

Splits and Phases: 3: Goebbert Road & Algonquin Road

ø₂ (R)	₽ Ø4
132 s	18 s
≠ Ø5 ♥ ♥ Ø6 (R)	1 ø8
14s 118s	18 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$		5	ર્સ	77	7	<u></u>			4111	
Traffic Volume (vph)	0	0	4	272	Ō	599	3	1366	0	0	1430	3
Future Volume (vph)	0	0	4	272	0	599	3	1366	0	0	1430	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt		0.865				0.850						
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	1096	0	1698	1698	2760	1805	5151	0	0	6400	0
Flt Permitted				0.950	0.950		0.950					
Satd. Flow (perm)	0	1096	0	1698	1698	2760	1805	5151	0	0	6400	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	50%	1%	0%	3%	0%	6%	0%	0%	2%	67%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	4	0	148	148	651	3	1485	0	0	1557	0
Turn Type		NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		. 8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		40.0	40.0	40.0	16.0	94.0			78.0	
Total Split (%)	10.7%	10.7%		26.7%	26.7%	26.7%	10.7%	62.7%			52.0%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		45.3	45.3	45.3	5.9	89.8			87.6	
Actuated g/C Ratio		0.05		0.30	0.30	0.30	0.04	0.60			0.58	
v/c Ratio		0.07		0.29	0.29	0.78	0.04	0.48			0.42	
Control Delay		69.8		43.0	43.0	55.3	70.3	17.8			13.0	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		69.8		43.0	43.0	55.3	70.3	17.8			13.0	
LOS		E		D	D	E	E	В			В	
Approach Delay		69.8			51.5			17.9			13.0	
Approach LOS		E			D			В			В	
Queue Length 50th (ft)		4		113	113	323	3	284			134	
Queue Length 95th (ft)		17		202	202	#514	15	335			177	

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Moßyinglifealki lifterport Page 7

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300	155					
Base Capacity (vph)		73		512	512	833	138	3082			3736	
Starvation Cap Reductn		0		0	0	0	0	0			0	
Spillback Cap Reductn		0		0	0	0	0	0			0	
Storage Cap Reductn		0		0	0	0	0	0			0	
Reduced v/c Ratio		0.05		0.29	0.29	0.78	0.02	0.48			0.42	
Intersection Summary												
Area Type: C	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 61 (41%), Referenced	I to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 80												
Control Type: Actuated-Coor	dinated											
Maximum v/c Ratio: 0.78												
Intersection Signal Delay: 24					tersectior							
	Intersection Capacity Utilization 67.7% ICU Level of Service C											
Analysis Period (min) 15												
# 95th percentile volume ex			eue may	be longer								
Queue shown is maximun	n after two	cycles.										

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

DØ2 (R)	,	 Ø4	₽ Ø8
94 s		16 s	40 s
▲ø5	Ø6 (R)		
16 s	78 s		

HCM 95th %tile Q(veh)

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	tt.			† ††		1
Traffic Vol, veh/h	1234	20	0	1217	0	10
Future Vol, veh/h	1234	20	0	1217	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1299	21	0	1281	0	11

Major1	Ν	lajor2	1	Minor1	
0	0	-	-	-	660
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	7.1
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	3.9
-	-		-	0	352
-	-	0	-	0	-
-	-	0	-	0	-
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AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Mosting Predki Harport Page 1

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Intersection Canacity Litilization

: Arlington Heights Road & I-90 WB On Ramp/Right-In/Right-Out Access Drive										08/25/202		
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations						1		ተተኈ			1111	1
Volume (vph)	0	0	0	0	0	136	0	1808	157	0	1433	423
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	0	0	136	0	1965	0	0	1433	423
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	0	0	1615	0	5114	0	0	7264	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	0.0	0.0	10.1	0.0	46.1	0.0	0.0	23.7	31.4
Adj Reference Time (s)	0.0	0.0	0.0	0.0	0.0	14.1	0.0	50.1	0.0	0.0	27.7	35.4
Permitted Option												
Adj Saturation A (vph)	0	0		0	0		0	1705		0	1816	
Reference Time A (s)	0.0	0.0		0.0	0.0		0.0	46.1		0.0	23.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			0.0			46.1			23.7	
Adj Reference Time (s)		8.0			8.0			50.1			27.7	
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	0.0		0.0	46.1		0.0	23.7	
Ref Time Seperate (s)	0.0	0.0		0.0	0.0		0.0	42.4		0.0	23.7	
Reference Time (s)	0.0	0.0		0.0	0.0		46.1	46.1		23.7	23.7	
Adj Reference Time (s)	0.0	0.0		0.0	0.0		50.1	50.1		27.7	27.7	
Summary	EB WB		NB SB	Со	mbined							
Protected Option (s)	0.0		50.1									
Permitted Option (s)	8.0		50.1									
Split Option (s)	0.0		77.8									
Minimum (s)	0.0		50.1		50.1							
Right Turns	WBR	SBR										
Adj Reference Time (s)	14.1	35.4										
Cross Thru Ref Time (s)	50.1	0.0										
Oncoming Left Ref Time (s)	0.0	0.0										
Combined (s)	64.2	35.4										
. ,	5 n.E	00.1										
Intersection Summary Intersection Capacity Utilizati			53.5%	IC								

Intersection Capacity Utilization 53.5% ICU Level of Serv. Reference Times and Phasing Options do not represent an optimized timing plan.

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Mosting Preak HRaport Page 1

<u>Capacity Analysis Summary Sheets</u> Weekday Evening Peak Hour – Total Buildout Conditions

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ካካ	^	1	ኘኘ	^	1	ካካ	^	1	ካካ	4111	
Traffic Volume (vph)	90	867	467	654	884	224	572	1411	471	280	1261	99
Future Volume (vph)	90	867	467	654	884	224	572	1411	471	280	1261	99
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	130		400	360		210	350		380	265		0
Storage Lanes	2		1	2		1	2		1	2		Ũ
Taper Length (ft)	230		•	250		•	300		•	280		Ū
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.86	0.86
Frt	0.01	0.01	0.850	0.01	0.01	0.850	0.01	0.01	0.850	0.01	0.989	0.00
Flt Protected	0.950		0.000	0.950		0.000	0.950		0.000	0.950	0.000	
Satd. Flow (prot)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6229	0
Flt Permitted	0.950	0101	1010	0.950	0000	1000	0.950	0100	1000	0.950	OLLO	Ū
Satd. Flow (perm)	3502	5151	1615	3433	5353	1599	3467	5406	1568	3367	6229	0
Right Turn on Red	0002	0101	No	0100	0000	No	0101	0100	No	0001	OLLO	No
Satd. Flow (RTOR)			110			110			110			110
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		864			394			463			944	
Travel Time (s)		13.1			6.0			9.0			18.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	6%	0%	2%	2%	1%	1%	1%	3%	4%	4%	1%
Shared Lane Traffic (%)	070	070	070	270	270	170	170	170	070	- 70	70	170
Lane Group Flow (vph)	95	913	492	688	931	236	602	1485	496	295	1431	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	U
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases	•	•	4	Ŭ	Ū	8	Ū	-	2	•	Ŭ	
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	
Switch Phase	•	•	•	•	, T	•	•	_				
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	15.0	
Minimum Split (s)	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	9.5	9.5	24.0	
Total Split (s)	15.0	42.0	33.0	31.0	58.0	20.0	33.0	57.0	31.0	20.0	44.0	
Total Split (%)	10.0%	28.0%	22.0%	20.7%	38.7%	13.3%	22.0%	38.0%	20.7%	13.3%	29.3%	
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	4.5	4.5	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	
Act Effct Green (s)	9.1	36.0	70.2	26.5	53.4	74.6	28.2	51.2	83.7	15.3	38.3	
Actuated g/C Ratio	0.06	0.24	0.47	0.18	0.36	0.50	0.19	0.34	0.56	0.10	0.26	
v/c Ratio	0.45	0.74	0.65	1.14	0.49	0.30	0.92	0.80	0.57	0.86	0.90	
Control Delay	74.4	56.9	35.5	138.0	29.5	18.7	66.2	44.5	28.6	90.0	62.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	
Total Delay	74.4	56.9	35.5	138.0	29.5	18.7	66.2	44.5	29.2	90.0	62.6	
LOS	E	E	D	F	C	В	E	D	C	F	E	
Approach Delay	_	51.0	_		68.4	_	_	46.6	-		67.3	
Approach LOS		D			E			D			E	
Queue Length 50th (ft)	46	304	361	~413	204	115	279	507	378	148	397	
Queue Length 95th (ft)	78	358	492	m#459	m212	m141	m#397	565	m527	#225	445	

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Events Page 1

Lanes, Volumes, Timings 1: Arlington Heights Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		784			314			383			864	
Turn Bay Length (ft)	130		400	360		210	350		380	265		
Base Capacity (vph)	245	1236	759	606	1904	797	658	1847	875	347	1591	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	138	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.74	0.65	1.14	0.49	0.30	0.91	0.80	0.67	0.85	0.90	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 77 (51%), Reference	d to phase	2:NBT ar	nd 6:SBT,	Start of (Green							
Natural Cycle: 100												
Control Type: Actuated-Coo	rdinated											
Maximum v/c Ratio: 1.14												
Intersection Signal Delay: 57	7.4			In	tersectior	n LOS: E						
Intersection Capacity Utilization	tion 88.3%			IC	U Level o	of Service	E					
Analysis Period (min) 15												
 Volume exceeds capacit 	ty, queue is	theoretic	ally infinit	te.								
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												
m Volume for 95th percentile queue is metered by upstream signal.												
Splits and Phases: 1: Arlington Heights Road & Algonquin Road												

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\$ Ø5	🛛 🕂 🖉 Ø6 (R)	▶ _{Ø7} ♣ Ø8	
33 s	44 s	15 s 58 s	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	ሻ	<u>ተተ</u> ኑ		ሻ	<u> ተተ</u> ኑ		ሻ	4Î		ሻ	4	
Traffic Volume (vph)	183	1274	156	86	1305	25	261	6	100	31	0	173
Future Volume (vph)	183	1274	156	86	1305	25	261	6	100	31	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.997			0.858			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4886	0	1805	5072	0	1805	1371	0	1752	1599	0
Flt Permitted	0.152			0.140			0.391			0.607		
Satd. Flow (perm)	289	4886	0	266	5072	0	743	1371	0	1120	1599	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	1521	0	91	1415	0	278	112	0	33	184	0
Turn Type	pm+pt	NA	-	pm+pt	NA	-	Perm	NA	-	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8	-		4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase								-				
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	14.0	108.0		14.0	108.0		28.0	28.0		28.0	28.0	
Total Split (%)	9.3%	72.0%		9.3%	72.0%		18.7%	18.7%		18.7%	18.7%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		0.0	0.0		0.0	0.0	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	117.0	105.4		113.0	103.3		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.78	0.70		0.75	0.69		0.15	0.15		0.15	0.15	
v/c Ratio	0.61	0.44		0.33	0.40		2.57	0.56		0.20	0.79	
Control Delay	24.6	5.6		5.7	6.2		758.5	71.1		59.9	84.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.6	5.6		5.7	6.2		758.5	71.1		59.9	84.8	
LOS	24.0 C	3.0 A		<u>Э.</u> г	A		7 30.5 F	E		55.5 E	04.0 F	
Approach Delay	0	7.7		А	6.2		1	561.1		L	81.0	
Approach LOS		A			A A			501.1 F			61.0 F	
Queue Length 50th (ft)	45	97		8	110		~453	103		29	176	
Queue Length 95th (ft)	45 m93	130		13	63		~455 #642	103		29 64	#298	
	1192	150		13	05		#042	172		04	#230	

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Events Page 3

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	333	3432		314	3494		108	201		164	234	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.59	0.44		0.29	0.40		2.57	0.56		0.20	0.79	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 140 (93%), Reference	ed to phas	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Coc	ordinated											
Maximum v/c Ratio: 2.57												
Intersection Signal Delay: 6	7.6			In	tersectior	n LOS: E						
Intersection Capacity Utiliza	tion 79.4%			IC	CU Level of	of Service	D					
Analysis Period (min) 15												
 Volume exceeds capaci 			ally infini	te.								
Queue shown is maximu												_
# 95th percentile volume e			eue may	be longe	r.							
Queue shown is maximu												_
m Volume for 95th percen	tile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 2: Tor	nne Road &	Alaonaui	n Road									
										1		

Ø1	■	× 04
14 s	108 s	28 s
_ ⊀ Ø5	♥ ∞ Ø6 (R)	1
14 s	108 s	28 s

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT Lane Configurations 1 <t< th=""><th>SBR 46 1900 0 1.00 1.00</th></t<>	SBR 46 1900 0 1.00 1.00
Traffic Volume (vph) 59 1190 5 2 1290 83 6 1 1 57 3 Future Volume (vph) 59 1190 5 2 1290 83 6 1 1 57 3 Ideal Flow (vph) 1900	46 1900 0 1.00
Traffic Volume (vph) 59 1190 5 2 1290 83 6 1 1 57 3 Future Volume (vph) 59 1190 5 2 1290 83 6 1 1 57 3 Ideal Flow (vph) 1900	46 1900 0 1.00
Ideal Flow (vphpl) 1900 <td>1900 0 1.00</td>	1900 0 1.00
Ideal Flow (vphpl) 1900 <td>0 0 1.00 0</td>	0 0 1.00 0
Storage Length (ft) 110 0 165 0 0 100 Storage Lanes 1 0 1 0 0 0 1 Taper Length (ft) 130 100 25 80 Lane Util. Factor 1.00 0.95 0.95 1.00 1.00 1.00 1.00 Frt 0.999 0.991 0.983 0.859 Flt Protected 0.950 0.950 0.964 0.950 Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 0.785 0.752 0.752 0.752	0 0 1.00 0
Storage Lanes 1 0 1 0 0 0 1 Taper Length (ft) 130 100 25 80 Lane Util. Factor 1.00 0.95 0.95 1.00 1.00 1.00 1.00 1.00 Frt 0.999 0.950 0.951 0.964 0.950 0.859 Flt Protected 0.950 0.950 0 0 1600 0 1805 1632 Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 0.785 0.752 0.752 0.752	0 1.00 0 0
Taper Length (ft) 130 100 25 80 Lane Util. Factor 1.00 0.95 0.95 1.00 0.95 1.00 0.859 0.859 0.859 0.859 0.859 0.950 0.964 0.950 0.950 0.950 Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 <td>1.00 0 0</td>	1.00 0 0
Lane Util. Factor 1.00 0.95 0.95 1.00 0.95 0.95 1.00 <th1.00< th=""> 1.00 1.00</th1.00<>	0
Frt 0.999 0.991 0.983 0.859 Flt Protected 0.950 0.950 0.964 0.950 Satd. Flow (prot) 1805 3435 0 1805 3509 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 0.785 0.752	0
Flt Protected 0.950 0.964 0.950 Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 0.785 0.752	0
Satd. Flow (prot) 1805 3435 0 1805 3509 0 0 1600 0 1805 1632 Flt Permitted 0.155 0.224 0.785 0.752	0
Flt Permitted 0.155 0.224 0.785 0.752	0
Right Turn on Red No No No	
Satd. Flow (RTOR)	
Link Speed (mph) 45 45 25 25	
Link Distance (ft) 1142 483 222 765	
Travel Time (s) 17.3 7.3 6.1 20.9	
Peak Hour Factor 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96	0.96
Heavy Vehicles (%) 0% 5% 0% 0% 2% 1% 0% 100% 0% 0% 0%	0%
Shared Lane Traffic (%)	• / •
Lane Group Flow (vph) 61 1245 0 2 1430 0 0 8 0 59 51	0
Turn Type pm+pt NA Perm NA Perm NA Perm NA	Ū
Protected Phases 5 2 6 8 4	
Permitted Phases 2 6 8 4	
Detector Phase 5 2 6 6 8 8 4 4	
Switch Phase	
Minimum Initial (s) 3.0 15.0 15.0 15.0 8.0 8.0 8.0 8.0	
Minimum Split (s) 9.5 24.0 24.0 24.0 18.0 18.0 18.0 18.0	
Total Split (s) 14.0 125.0 111.0 111.0 25.0 25.0 25.0 25.0 25.0	
Total Split (%) 9.3% 83.3% 74.0% 74.0% 16.7% 16.7% 16.7% 16.7%	
Yellow Time (s) 3.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	
All-Red Time (s) 0.0 1.5 1.5 1.5 1.5 1.5 1.5 1.5	
Lost Time Adjust (s) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Lost Time (s) 3.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0	
Lead/Lag Lead Lag Lag	
Lead-Lag Optimize? Yes Yes Yes	
Recall Mode None C-Min C-Min C-Min None None None None	
Act Effct Green (s) 130.7 129.4 121.5 121.5 12.6 12.6 12.6	
Actuated g/C Ratio 0.87 0.86 0.81 0.81 0.08 0.08 0.08	
v/c Ratio 0.19 0.42 0.01 0.50 0.07 0.50 0.38	
Control Delay 3.3 3.0 5.0 7.0 62.4 78.7 71.6	
Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Total Delay 3.3 3.0 5.0 7.0 62.4 78.7 71.6	
LOS A A A A E E E	
Approach Delay 3.0 7.0 62.4 75.4	
Approach LOS A A E E	
Queue Length 50th (ft) 10 112 0 248 7 56 48	
Queue Length 95th (ft) m18 148 3 351 25 104 92	

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Events Page 5

Lanes, Volumes, Timings 3: Goebbert Road & Algonquin Road

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1062			403			142			685	
Turn Bay Length (ft)	110			165						100		
Base Capacity (vph)	361	2964		345	2841			165		181	206	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.17	0.42		0.01	0.50			0.05		0.33	0.25	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 15	60											
Offset: 120 (80%), Referen	nced to phase	e 2:EBTL	and 6:W	BTL, Star	t of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.50												
Intersection Signal Delay:	8.0			In	tersectior	n LOS: A						
Intersection Capacity Utiliz	ation 65.7%			IC	U Level o	of Service	С					
Analysis Period (min) 15												
m Volume for 95th perce	entile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 3: G	oebbert Road	d & Alaon	quin Roa	d								
		<u></u>		-								

125 s	25 s
→ Ø5 ↓ ↓ Ø6 (R)	↑ ø8
14s 111s	25 s

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		ሻ	र्स	11	5	^			411176	
Traffic Volume (vph)	2	0	0	205	1	607	0	1845	0	0	1813	1
Future Volume (vph)	2	0	0	205	1	607	0	1845	0	0	1813	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	0		0	320		300	155		0	0		0
Storage Lanes	0		0	1		2	1		0	0		0
Taper Length (ft)	25			180			150			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.88	1.00	0.91	1.00	1.00	0.86	0.86
Frt						0.850						
Flt Protected		0.950		0.950	0.953							
Satd. Flow (prot)	0	1805	0	1681	1687	2814	1900	5406	0	0	6471	0
Flt Permitted				0.950	0.953							
Satd. Flow (perm)	0	1900	0	1681	1687	2814	1900	5406	0	0	6471	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		158			665			594			309	
Travel Time (s)		3.6			15.1			11.6			7.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	0%	1%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	2	0	105	107	626	0	1902	0	0	1870	0
Turn Type	Perm	NA		Split	NA	Prot	Prot	NA			NA	
Protected Phases		4		8	8	8	5	2			6	
Permitted Phases	4											
Detector Phase	4	4		8	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	3.0	15.0			15.0	
Minimum Split (s)	16.0	16.0		24.0	24.0	24.0	9.5	24.0			24.0	
Total Split (s)	16.0	16.0		32.0	32.0	32.0	16.0	102.0			86.0	
Total Split (%)	10.7%	10.7%		21.3%	21.3%	21.3%	10.7%	68.0%			57.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	3.5	4.5			4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.0	1.5			1.5	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0	6.0	4.5	6.0			6.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Act Effct Green (s)		8.1		39.1	39.1	39.1		96.0			96.0	
Actuated g/C Ratio		0.05		0.26	0.26	0.26		0.64			0.64	
v/c Ratio		0.02		0.24	0.24	0.86		0.55			0.45	
Control Delay		67.5		47.3	47.4	64.5		15.7			16.4	
Queue Delay		0.0		0.0	0.0	0.0		0.0			0.0	
Total Delay		67.5		47.3	47.4	64.5		15.7			16.4	
LOS		E		D	D	E		B			B	
Approach Delay		67.5			60.1			15.7			16.4	
Approach LOS		E			E	•		В			B	
Queue Length 50th (ft)		2		83	85	323		358			263	
Queue Length 95th (ft)		11		160	162	#562		396			m281	

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Eventian Page 7

Lanes, Volumes, Timings
4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

08/25/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		78			585			514			229	
Turn Bay Length (ft)				320		300						
Base Capacity (vph)		126		437	439	732		3459			4141	
Starvation Cap Reductn		0		0	0	0		0			0	
Spillback Cap Reductn		0		0	0	0		0			0	
Storage Cap Reductn		0		0	0	0		0			0	
Reduced v/c Ratio		0.02		0.24	0.24	0.86		0.55			0.45	
Intersection Summary												
Area Type: Ot	her											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 41 (27%), Referenced	to phase 2	NBT an	d 6:SBT,	Start of 0	Green							
Natural Cycle: 80												
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 24.1					tersectior							
Intersection Capacity Utilizatio	n 76.8%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
# 95th percentile volume exc	•		eue may	be longer	•							
Queue shown is maximum												
m Volume for 95th percentile	e queue is	metered	by upstr	eam sign	al.							

Splits and Phases: 4: Arlington Heights Road & Access Drive/I-90 WB Off Ramp

∮ø2 (R) ♥	404	₽ Ø8	
102 s	16 s	32 s	
▲ Ø5 🖕 🖡 Ø6 (R)			
16 s 86 s			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	朴朴			*††		1
Traffic Vol, veh/h	1598	15	0	1696	0	15
Future Vol, veh/h	1598	15	0	1696	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1682	16	0	1785	0	16

Major/Minor N	/lajor1	Ν	1ajor2	Ν	Minor1	
Conflicting Flow All	0	0	-	-	-	849
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	265
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	265
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		19.4	
HCM LOS	•				С	
NA' 1 /NA ' NA '			EDT	500	WDT	
Minor Lane/Major Mvmt	t N	BLn1	EBT	EBR	WBT	
Capacity (veh/h)		265	-	-	-	
HCM Lane V/C Ratio		0.06	-	-	-	
HCM Control Delay (s)		19.4	-	-	-	
HCM Lane LOS		С	-	-	-	

0.2

HCM 95th %tile Q(veh)

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Every PMPR - Overall Site 23-086 - Mixed-Use Bevery PMPR - Overall Site 23 Page 1

Intersection Capacity Utilization

PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vphReference Time (s)0.Adj Reference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 0) 1900) 4.0) 4.0) 120) 0) 1.00) 1.00) 0.0 0 0.0 0 0.0 Ves) 0.0 0 0.0	EBR 0 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0 0.0	WBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0 0.0	WBT 0 1900 4.0 4.0 120 0 1.00 1.00 1.00 0.0 0.00 Yes 0.0 0.0	WBR 185 185 No 1900 4.0 4.0 4.0 120 185 1.00 0.85 1615 0.0 13.7 17.7	NBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	T NBT 2269 2269 1900 4.0 4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 5117 0.0 0.00 Yes 57.5 61.5	NBR 185 185 185 0 1900 4.0 4.0 4.0 4.0 120 0 0.0 0.85 0 0.0 0.0 0.0	SBL 0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	↓ SBT 1814 2000 4.0 4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0 34.0	1900 4.0 4.0 568 1.00 0.85 1615 0.0 42.2
Lane ConfigurationsVolume (vph)PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time B (s)0.Reference Time B (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 0) 1900) 4.0) 4.0) 120) 0) 1.00) 1.00) 0.0 0 0.0 0 0.0 Ves) 0.0 0 0.0	0 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	0 1900 4.0 4.0 120 0 1.00 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	No 1900 4.0 4.0 120 185 1.00 0.85 1615 0.0 13.7	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	↑↑↓ 2269 1900 4.0 4.0 4.0 120 2454 0.91 0.99 51177 0.0 0.00 Yes 57.5	185 No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	0 1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	2000 4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	No 1900 4.0 120 568 1.00 0.85 1615 0.0 42.2
Volume (vph)PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vphReference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	1900 4.0 120 120 120 120 100 1.00 1.00 1.00 0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	No 1900 4.0 4.0 120 185 1.00 0.85 1615 0.0 13.7	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2269 1900 4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2000 4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	568 No 1900 4.0 4.0 568 1.00 0.85 1615 0.0 42.2
PedestriansPed ButtonPedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vphReference Time (s)0.Adj Reference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	1900 4.0 120 120 120 120 100 1.00 1.00 1.00 0	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	1900 4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	No 1900 4.0 4.0 120 185 1.00 0.85 1615 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2269 1900 4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	No 1900 4.0 4.0 120 0 1.00 0.85 0 0.0	1900 4.0 4.0 120 0 1.00 0.95 0 0.0	2000 4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	No 1900 4.0 4.0 568 1.00 0.85 1615 0.0 42.2
Ped ButtonPedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)10Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)0.9Ped Intf Time (s)0.Protected Option AllowedReference Time (s)Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)Reference Time B (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 4.0) 4.0) 120) 0) 0) 0) 0) 0) 0) 0) 0) 0) 0.0 O 0.0) 0.0) 0.0) 0.0) 0.0) 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 185 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	1900 4.0 4.0 568 1.00 0.85 1615 0.0 42.2
Pedestrian Timing (s)Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)12Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)0.9Ped Intf Time (s)0.Protected Option AllowedReference Time (s)Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)Reference Time B (s)0.Reference Time (s)3.Adj Reference Time (s)3.Adj Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 4.0) 4.0) 120) 0) 0) 0) 0) 0) 0) 0) 0) 0) 0.0 O 0.0) 0.0) 0.0) 0.0) 0.0) 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 185 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	4.0 120 568 1.00 0.85 1615 0.0 42.2
Free RightIdeal Flow190Lost Time (s)4.Minimum Green (s)4.Refr Cycle Length (s)12Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vph)Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 4.0) 4.0) 120) 0) 0) 0) 0) 0) 0) 0) 0) 0) 0.0 O 0.0) 0.0) 0.0) 0.0) 0.0) 0.0	1900 4.0 120 0 1.00 0.85 0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0 0.0	4.0 4.0 120 0 1.00 1.00 0.0 0.0 0.00 Yes 0.0 0.0	1900 4.0 120 185 1.00 0.85 1615 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	1900 4.0 4.0 120 0 1.00 0.85 0 0.0 0.0	4.0 4.0 120 0 1.00 0.95 0 0.0 0.0	4.0 4.0 120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	1900 4.0 4.0 568 1.00 0.85 1615 0.0 42.2
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Refr Cycle Length (s)12Volume Combined (vph)10Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)9Ped Intf Time (s)0.Pedestrian Frequency (%)9Protected Option Allowed7Reference Time (s)0.Adj Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)7Reference Time B (s)0.Adj Saturation B (vph)7Reference Time (s)0.Adj Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	120 0 1.00 5 1.00 5 1.00 0 0.0 0 0.0 0 0.0 Yes 0.0 0 0.0 0 0.0	120 0 1.00 0.85 0 0.0	120 0 1.00 0.95 0 0.0 0.0 0.0	120 0 1.00 0 0.0 0.00 Yes 0.0 0.0	120 185 1.00 0.85 1615 0.0 13.7	120 0 1.00 0.95 0 0.0	120 2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	120 0 1.00 0.85 0 0.0 0.0	120 0 1.00 0.95 0 0.0 0.0	120 1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	120 568 1.00 0.85 1615 0.0 42.2
Volume Combined (vph)Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Permitted OptionAdj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vph)Reference Time B (s)0.Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	0 0 0 1.00 5 1.00 5 1.00 0 0.0 0 0.0 Yes 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	0 1.00 0.85 0 0.0	0 1.00 0.95 0 0.0 0.0 0.0	0 1.00 0 0.0 0.00 Yes 0.0 0.0	185 1.00 0.85 1615 0.0 13.7	0 1.00 0.95 0 0.0	2454 0.91 0.99 5117 0.0 0.00 Yes 57.5	0 1.00 0.85 0 0.0	0 1.00 0.95 0 0.0	1814 0.91 1.00 7264 0.0 0.00 Yes 30.0	568 1.00 0.85 1615 0.0 42.2
Lane Utilization Factor1.0Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)Reference Time B (s)0.Adj Saturation B (vphReference Time (s)3.Adj Reference Time (s)3.Adj Reference Time (s)3.Split Option3.Ref Time Combined (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.Reference Time (s)0.	1.00 1.00 1.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.00 0.85 0 0.0	1.00 0.95 0 0.0 0.0	1.00 1.00 0.0 0.00 Yes 0.0 0.0	1.00 0.85 1615 0.0 13.7	1.00 0.95 0 0.0	0.91 0.99 5117 0.0 0.00 Yes 57.5	1.00 0.85 0 0.0	1.00 0.95 0 0.0	0.91 1.00 7264 0.0 0.00 Yes 30.0	1.00 0.85 1615 0.0 42.2
Turning Factor (vph)0.9Saturated Flow (vph)Ped Intf Time (s)0.Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)Reference Time B (s)0.Adj Reference Time (s)0.Reference Time B (s)0.Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	5 1.00 0 0.0 0.00 Yes 0 0.0 0 0.0 0 0.0	0.85 0 0.0	0.95 0 0.0 0.0 0.0	1.00 0.0 0.00 Yes 0.0 0.0	0.85 1615 0.0 13.7	0.95 0 0.0	0.99 5117 0.0 0.00 Yes 57.5	0.85 0 0.0	0.95 0 0.0	1.00 7264 0.0 0.00 Yes 30.0	1.00 0.85 1615 0.0 42.2
Saturated Flow (vph)Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)0.Adj Saturation B (vph)Reference Time B (s)0.Adj Reference Time (s)Adj Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 0 0.00 Yes 0 0.0 0 0.0	0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.00 Yes 0.0 0.0	1615 0.0 13.7	0 0.0 0.0	5117 0.0 0.00 Yes 57.5	0 0.0 0.0	0 0.0 0.0	7264 0.0 0.00 Yes 30.0	1615 0.0 42.2
Ped Intf Time (s)0.Pedestrian Frequency (%)Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Adj Reference Time (s)0.Adj Saturation A (vph)Reference Time A (s)Reference Time B (s)0.Adj Reference Time B (s)0.Reference Time (s)3.Adj Reference Time (s)3.Adj Reference Time (s)3.Split OptionRef Time Combined (s)Ref Time Seperate (s)0.Reference Time (s)0.) 0.0 0.00 Yes) 0.0) 0.0	0.0	0.0	0.0 0.00 Yes 0.0 0.0	0.0	0.0	0.0 0.00 Yes 57.5	0.0	0.0	0.0 0.00 Yes 30.0	0.0 42.2
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Protected Option AllowedReference Time (s)0.Adj Reference Time (s)0.Permitted Option0.Adj Saturation A (vph)0.Reference Time A (s)0.Adj Saturation B (vph)0.Reference Time B (s)0.Adj Reference Time (s)0.Adj Reference Time (s)0.Split Option0.Ref Time Combined (s)0.Reference Time (s)0.Reference Time (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	Yes 0 0.0 0 0.0		0.0	Yes 0.0 0.0			Yes 57.5			Yes 30.0	
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Adj Saturation B (vphReference Time B (s)0.Reference Time (s)Adj Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	0.0		0.0	0.0		0.0	57.5		0.0	30.0	
Reference Time B (s)0.Reference Time (s)Adj Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.) 0		0.0	0		NA	NA		NA	NA	
Reference Time (s)Adj Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.			0.0	0.0		NA	NA		NA	NA	
Adj Reference Time (s)Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	0.0		0.0	0.0			57.5			30.0	
Split OptionRef Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	8.0			8.0			61.5			34.0	
Ref Time Combined (s)0.Ref Time Seperate (s)0.Reference Time (s)0.	0.0			0.0			••			••	
Ref Time Seperate (s)0.Reference Time (s)0.	0.0		0.0	0.0		0.0	57.5		0.0	30.0	
Reference Time (s) 0.			0.0	0.0		0.0	53.2		0.0	30.0	
(<i>i</i>			0.0	0.0		57.5	57.5		30.0	30.0	
Adj Reference Time (s) 0.			0.0	0.0		61.5	61.5		34.0	34.0	
: ()						01.0	01.0		04.0	04.0	
Summary EB WI		NB SB	Co	mbined							
Protected Option (s) 0.		61.5									
Permitted Option (s) 8.		61.5									
Split Option (s) 0.		95.5									
Minimum (s) 0.)	61.5		61.5							
Right Turns WBI	SBR										
Adj Reference Time (s) 17.											
Cross Thru Ref Time (s) 61.											
Oncoming Left Ref Time (s) 0.											
Combined (s) 79.											
Intersection Summary	9 40.Z										

Reference Times and Phasing Options do not represent an optimized timing plan.

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Events Page 1

Algonquin Road with Tonne Road Intersection – Traffic Signal Modifications and Improvements

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	1	<u>ተተ</u> ኑ		۲ ۲	ተተኈ		۲	el 🗧		<u>۲</u>	eî	
Traffic Volume (vph)	183	1279	35	34	1305	25	84	6	18	31	0	173
Future Volume (vph)	183	1279	35	34	1305	25	84	6	18	31	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.997			0.886			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4926	0	1805	5072	0	1805	1461	0	1752	1599	0
Flt Permitted	0.145			0.165			0.451			0.741		
Satd. Flow (perm)	276	4926	0	314	5072	0	857	1461	0	1367	1599	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								19			162	
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	1398	0	36	1415	0	89	25	0	33	184	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	14.0	103.0		14.0	103.0		33.0	33.0		33.0	33.0	
Total Split (%)	9.3%	68.7%		9.3%	68.7%		22.0%	22.0%		22.0%	22.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Min		None	C-Min		Мах	Мах		None	None	
Act Effct Green (s)	113.4	103.1		106.7	98.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.76	0.69		0.71	0.65		0.18	0.18		0.18	0.18	

PMPR 23-086 - Mixed-Use Development - Arlington Heights 3:21 pm 07/21/2022 Projected Weekday Evening Peak House ynchro 11 Report Page 1

10/13/2023

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	0.64	0.41		0.13	0.43		0.58	0.09		0.13	0.44	
Control Delay	30.4	6.9		3.9	8.6		72.6	25.0		53.5	14.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.4	6.9		3.9	8.6		72.6	25.0		53.5	14.1	
LOS	С	А		А	А		E	С		D	В	
Approach Delay		9.8			8.5			62.1			20.1	
Approach LOS		А			А			E			С	
Queue Length 50th (ft)	51	109		4	174		81	5		28	18	
Queue Length 95th (ft)	m136	142		m8	80		147	33		61	91	
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	315	3385		336	3312		154	278		246	420	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.62	0.41		0.11	0.43		0.58	0.09		0.13	0.44	
Intersection Summary												
	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 140 (93%), Reference	ced to phas	e 2:EBTL	and 6:W	BTL, Star	rt of Gree	n						
Natural Cycle: 60												
Control Type: Actuated-Coc	ordinated											
Maximum v/c Ratio: 0.64												
Intersection Signal Delay: 1					itersectior							
Intersection Capacity Utiliza	ation 71.6%			IC	CU Level of	of Service	C					
Analysis Period (min) 15												
m Volume for 95th percer	ntile queue i	s metered	l by upstr	eam sigr	nal.							

Splits and Phases: 2: Tonne Road & Algonquin Road

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14 s	103 s	33 s
_ # Ø5	Ø6 (R)	™ ø8
14 s	103 s	33 s

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	۲.	<u>ተተ</u> ኑ		5	ተተኈ		ኘኘ	eî 🗧		7	eî 🗧	
Traffic Volume (vph)	100	999	145	79	927	16	193	1	78	17	1	172
Future Volume (vph)	100	999	145	79	927	16	193	1	78	17	1	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	180		0	100		0	86		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	155			180			80			63		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.998			0.852			0.851	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4795	0	1805	4751	0	3502	1298	0	1703	1601	0
Flt Permitted	0.238			0.183			0.950			0.950		
Satd. Flow (perm)	439	4795	0	348	4751	0	3502	1298	0	1703	1601	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								85			187	
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		397			546			255			409	
Travel Time (s)		6.0			8.3			5.8			11.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	7%	0%	0%	9%	7%	0%	0%	25%	6%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	1244	0	86	1025	0	210	86	0	18	188	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6								
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5	20.0		9.5	20.0	
Total Split (s)	24.0	99.0		13.0	88.0		18.0	20.0		18.0	20.0	
Total Split (%)	16.0%	66.0%		8.7%	58.7%		12.0%	13.3%		12.0%	13.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		4.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		Max	None		None	None	
Act Effct Green (s)	104.8	94.2		103.4	93.5		18.7	25.3		7.2	9.6	
Actuated g/C Ratio	0.70	0.63		0.69	0.62		0.12	0.17		0.05	0.06	

AMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday MoßnynghPealki HReport Page 1

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	0.29	0.41		0.28	0.35		0.48	0.30		0.22	0.68	
Control Delay	7.3	11.6		7.3	11.4		67.7	14.7		74.5	21.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.3	11.6		7.3	11.4		67.7	14.7		74.5	21.3	
LOS	А	В		А	В		E	В		E	С	
Approach Delay		11.3			11.1			52.3			25.9	
Approach LOS		В			В			D			С	
Queue Length 50th (ft)	20	126		18	104		104	1		17	1	
Queue Length 95th (ft)	m38	167		31	117		150	55		45	78	
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	494	3119		336	3003		437	289		153	318	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.22	0.40		0.26	0.34		0.48	0.30		0.12	0.59	
Intersection Summary												
	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 115 (77%), Reference	ced to phase	e 2:EBTL	and 6:W	BTL, Star	t of Greer	n						
Natural Cycle: 65												
Control Type: Actuated-Coc	ordinated											
Maximum v/c Ratio: 0.68												
Intersection Signal Delay: 1				In	tersectior	n LOS: B						
Intersection Capacity Utiliza	tion 60.2%			IC	CU Level o	of Service	В					
Analysis Period (min) 15												
m Volume for 95th percen	ntile queue i	s meterec	l by upstr	eam sign	al.							

Splits and Phases: 2: Tonne Road & Algonquin Road



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EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
5	##%		5	44 b		ሻሻ	ĥ		ň	ĥ	
		156			25		6	100	31	0	173
		156			25		6	100	31	0	173
											1900
		12	12					12	12		12
	0%			0%			0%			0%	
100		0	180		0	100		0	86		0
1		0	1		0	2		0	1		0
155			180			80			63		
1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
	0.984			0.997			0.858			0.850	
0.950			0.950			0.950			0.950		
1805	4886	0	1805	5072	0	3502	1371	0	1752	1599	0
0.141			0.129			0.950			0.950		
268	4886	0	245	5072	0	3502	1371	0	1752	1599	0
		No			No			Yes			Yes
							106			142	
	45			45			30			25	
	397			546			255			409	
	6.0			8.3			5.8			11.2	
0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
0%	5%	0%	0%	2%	0%	0%	0%	20%	3%	0%	1%
0	0	0	0	0	0	0	0	0	0	0	0
	0%			0%			0%			0%	
195	1521	0	91	1415	0	278	112	0	33	184	0
pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
5	2		1	6		3	8		7	4	
2			6								
5	2		1	6		3	8		7	4	
3.0	15.0		3.0	15.0		5.0	8.0		5.0	8.0	
9.5	24.0		9.5	24.0		9.5	18.0		9.5	17.0	
14.0	97.0		14.0	97.0		22.0	18.0		21.0	17.0	
9.3%	64.7%		9.3%	64.7%		14.7%	12.0%		14.0%	11.3%	
3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
0.0	1.5		0.0	1.5		1.0	1.5		1.0	1.5	
0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
3.5	6.0		3.5	6.0		4.5	6.0		4.5	6.0	
Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
	C-Min		None	C-Min		Мах	None		None	None	
None			110110	•							
107.3	95.0		103.1	93.0		17.5	21.0		8.3	9.8	
	 183 183 183 183 183 180 12 100 1 155 1.00 0.950 1805 0.141 268 0.141 268 0.94 100% 0.94 100% 0.94 100% 0.94 100% 0.950 14.0 9.3% 3.5 0.0 3.5 Lead 	Image:	\uparrow \uparrow 183127415618312741561900190019001212120%01212120%010000155001.000.910.910.9500.98400.9500.910.911805488600.14100268488600.14100268488600.940.940.94100%100%00%5%0%0000%5%0%0%5%019515210pm+ptNA05222203.015.009.524.0114.097.009.3%64.7%03.56.01.50.00.00.5150.01.50.01.50.03.56.01.5150.01.5150.01.5161.5171.5181.5191.51915.014.097.015.00.015.00.015.00.015.00.0160.5 </td <td>$\uparrow$$\uparrow$$\uparrow$1831274156861831274156861900190019001900121212120%01801011551801.000.910.911.000.910.910.9500.9501805488600.9500.9501805488600.1410.12926848860268488600.940.940.94100%100%100%0%5%0%0%000%100%100%100%100%100%0%5%0%0%511951521091pm+pt521265213.015.03.09.524.09.514.097.014.09.3%3.54.53.50.00.00.00.00.03.56.03.5LeadLagLead</td> <td>$\uparrow$$\uparrow$$\uparrow$$\uparrow$$\uparrow$183127415686130518312741568613051900190019001900190012121212120%01801100018011551801.000.9840.9970.9500.9500.95018054886018050.9500.9250.129268488602453975466.08.30.940.940.94100%100%100%0.950000010515210000003.0195152109.5216-3.015.03.014.097.09.3%64.7%3.54.50.00.00.50.014.097.014.097.014.097.014.097.014.097.014.097.014.015.00.00.00.50.015.00.016.03.517.014.018.015.018.015.018.015.018.015.018.015.0</td> <td>EBLEBTEBRWBLWBTWBR$\uparrow \uparrow \uparrow \uparrow$156861305251831274156861305251831274156861305251900190019001900190019001212121212120%01221212120%010010110000180001551801000.910.910.911000.910.911.000.910.911550.921805507201805488601805507200.940.940.940.940.94180548860245507200.14100.12900026848860245507200.940.940.940.940.940.94100%100%100%100%100%100%0.940.940.940.940.940.94100%100%100%100%100%00%000000%000000%000000%000000%00100%100%0%<</td> <td>EBL EBT EBR WBL WBT WBR NEL 1 141 156 86 1305 25 261 183 1274 156 86 1305 25 261 183 1274 156 86 1305 25 261 180 1274 12 12 12 12 12 12 00 1900 1900 1900 1900 1900 1900 100 0 180 0 100 2 15 100 0.91 0.91 1.00 0.91 0.97 0.97 0.950 0.950 0.950 0.950 0.950 0.950 1805 4886 0 1805 5072 0 3502 0.44 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.950<!--</td--><td>EBL EBT EBR WBL WBT WBR NEL NET 1 1 1 1 1 1 1 1 183 1274 156 86 1305 25 261 6 1900 1900 1900 1900 1900 1900 1900 1900 12 12 12 12 12 12 12 12 0% 0 1 0 1 0 1 0% 100 100 0.91 0.91 0.01 0.91 0.91 0.91 0.91 0.91 100 0.91 0.91 1.00 0.91</td><td>EBI EBT EBR WBL WBT WBR NEL NET NER 183 1274 156 86 1305 25 261 6 100 183 1274 156 86 1305 25 261 6 100 1900 1900 1900 1900 1900 1900 1900 1900 121 12 10 11 0 12 0 11 0 12 10</td><td>EBLEBTEBRWBLWBTWBRNELNETNERSWL1$+++$1$+++$11NNNNN18312741568613052526161003118312741568613052526161003119001900190019001900190019001900190019001212121212121212121212000180010010008610100086100.911.000.910.910.971.001.001.001.000.9500.9500.9500.9500.9500.9500.9500.9500.9540.9555072035021371017520.1410.1290.9500.9500.9500.9500.950268488602455072035021371017520.1410.1290.940.940.940.940.940.940.94100%<td>EBL EBR WBL WBL WBR NEL NET NET</td></td></td>	\uparrow \uparrow \uparrow 1831274156861831274156861900190019001900121212120%01801011551801.000.910.911.000.910.910.9500.9501805488600.9500.9501805488600.1410.12926848860268488600.940.940.94100%100%100%0%5%0%0%000%100%100%100%100%100%0%5%0%0%511951521091pm+pt521265213.015.03.09.524.09.514.097.014.09.3%3.54.53.50.00.00.00.00.03.56.03.5LeadLagLead	\uparrow \uparrow \uparrow \uparrow \uparrow 183127415686130518312741568613051900190019001900190012121212120%01801100018011551801.000.9840.9970.9500.9500.95018054886018050.9500.9250.129268488602453975466.08.30.940.940.94100%100%100%0.950000010515210000003.0195152109.5216-3.015.03.014.097.09.3%64.7%3.54.50.00.00.50.014.097.014.097.014.097.014.097.014.097.014.097.014.015.00.00.00.50.015.00.016.03.517.014.018.015.018.015.018.015.018.015.018.015.0	EBLEBTEBRWBLWBTWBR $\uparrow \uparrow \uparrow \uparrow$ 156861305251831274156861305251831274156861305251900190019001900190019001212121212120%01221212120%010010110000180001551801000.910.910.911000.910.911.000.910.911550.921805507201805488601805507200.940.940.940.940.94180548860245507200.14100.12900026848860245507200.940.940.940.940.940.94100%100%100%100%100%100%0.940.940.940.940.940.94100%100%100%100%100%00%000000%000000%000000%000000%00100%100%0%<	EBL EBT EBR WBL WBT WBR NEL 1 141 156 86 1305 25 261 183 1274 156 86 1305 25 261 183 1274 156 86 1305 25 261 180 1274 12 12 12 12 12 12 00 1900 1900 1900 1900 1900 1900 100 0 180 0 100 2 15 100 0.91 0.91 1.00 0.91 0.97 0.97 0.950 0.950 0.950 0.950 0.950 0.950 1805 4886 0 1805 5072 0 3502 0.44 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.950 </td <td>EBL EBT EBR WBL WBT WBR NEL NET 1 1 1 1 1 1 1 1 183 1274 156 86 1305 25 261 6 1900 1900 1900 1900 1900 1900 1900 1900 12 12 12 12 12 12 12 12 0% 0 1 0 1 0 1 0% 100 100 0.91 0.91 0.01 0.91 0.91 0.91 0.91 0.91 100 0.91 0.91 1.00 0.91</td> <td>EBI EBT EBR WBL WBT WBR NEL NET NER 183 1274 156 86 1305 25 261 6 100 183 1274 156 86 1305 25 261 6 100 1900 1900 1900 1900 1900 1900 1900 1900 121 12 10 11 0 12 0 11 0 12 10</td> <td>EBLEBTEBRWBLWBTWBRNELNETNERSWL1$+++$1$+++$11NNNNN18312741568613052526161003118312741568613052526161003119001900190019001900190019001900190019001212121212121212121212000180010010008610100086100.911.000.910.910.971.001.001.001.000.9500.9500.9500.9500.9500.9500.9500.9500.9540.9555072035021371017520.1410.1290.9500.9500.9500.9500.950268488602455072035021371017520.1410.1290.940.940.940.940.940.940.94100%<td>EBL EBR WBL WBL WBR NEL NET NET</td></td>	EBL EBT EBR WBL WBT WBR NEL NET 1 1 1 1 1 1 1 1 183 1274 156 86 1305 25 261 6 1900 1900 1900 1900 1900 1900 1900 1900 12 12 12 12 12 12 12 12 0% 0 1 0 1 0 1 0% 100 100 0.91 0.91 0.01 0.91 0.91 0.91 0.91 0.91 100 0.91 0.91 1.00 0.91	EBI EBT EBR WBL WBT WBR NEL NET NER 183 1274 156 86 1305 25 261 6 100 183 1274 156 86 1305 25 261 6 100 1900 1900 1900 1900 1900 1900 1900 1900 121 12 10 11 0 12 0 11 0 12 10	EBLEBTEBRWBLWBTWBRNELNETNERSWL1 $+++$ 1 $+++$ 11NNNNN18312741568613052526161003118312741568613052526161003119001900190019001900190019001900190019001212121212121212121212000180010010008610100086100.911.000.910.910.971.001.001.001.000.9500.9500.9500.9500.9500.9500.9500.9500.9540.9555072035021371017520.1410.1290.9500.9500.9500.9500.950268488602455072035021371017520.1410.1290.940.940.940.940.940.940.94100% <td>EBL EBR WBL WBL WBR NEL NET NET</td>	EBL EBR WBL WBL WBR NEL NET NET

PMPR - Overall Site 23-086 - Mixed-Use Development - Arlington Heights 10:38 am 06/05/2023 Projected Weekday Events Page 1

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
v/c Ratio	0.67	0.49		0.37	0.45		0.68	0.40		0.34	0.78	
Control Delay	33.9	9.6		9.7	11.2		72.8	16.2		77.0	40.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.9	9.6		9.7	11.2		72.8	16.2		77.0	40.5	
LOS	С	А		А	В		E	В		E	D	
Approach Delay		12.4			11.1			56.6			46.1	
Approach LOS		В			В			E			D	
Queue Length 50th (ft)	65	139		15	240		136	5		32	40	
Queue Length 95th (ft)	m132	167		24	134		188	67		68	#146	
Internal Link Dist (ft)		317			466			175			329	
Turn Bay Length (ft)	100			180			100			86		
Base Capacity (vph)	300	3095		282	3143		408	283		192	248	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.65	0.49		0.32	0.45		0.68	0.40		0.17	0.74	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 140 (93%), Referen	ced to phas	e 2:EBTL	and 6:W	BTL, Star	t of Greer	า						
Natural Cycle: 65												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.78												
Intersection Signal Delay: 1					tersectior							
Intersection Capacity Utiliza	ation 71.1%			IC	U Level o	of Service	C					
Analysis Period (min) 15												
# 95th percentile volume			eue may	be longer								
Queue shown is maximi												
m Volume for 95th percer	ntile queue i	s metered	l by upstr	eam sign	al.							
Splits and Phases: 2: To	nne Road &	Algongui	n Dood									
spins and Fliases. 2.10	TITLE RUAU &	Algoriqui	n Ruau									

₩_ _{Ø1}	υ − 1 Ø2 (R)	1 Ø3	¥ _{Ø4}
14 s	97 s	22 s	17 s
_ ⊀ ø₅	♥Ø6 (R)	6 ₀₇	≭ ø8
14 s	97 s	21 s	18 s